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Matheſis. Aſtronomia. (Tabulae aſtronomicae) 893.



Dr. *H A L L E* *r*'s

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ASTRONOMICAL TABLES.



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*EDMUNDUS HALLEIUS R.S.S.
Astronomus Regius et Geometriæ Professor Savilianus.*

ASTRONOMICAL TABLES

WITH

P R E C E P T S

BOTH IN

ENGLISH and LATIN

For computing the Places of the

SUN, MOON, PLANETS, and COMETS.

BY

EDMUND HALLET, L. L. D.

Late Regius Professor of ASTRONOMY at *Greenwich*.



L O N D O N,

Printed for WILLIAM INNYS in *Pater-noster Row*.

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G E O R G E R.

GEORGE the Second, by the Grace of God, King of Great Britain, France, and Ireland, Defender of the Faith, &c. To all to whom these Presents shall come, **Greeting:** Whereas Our Trusty and Wellbeloved WILLIAM INNYS, of Our City of London, Bookseller, hath, by his Petition, humbly represented unto Us, That he hath, at great Charge and Expence, been more than thirty Years printing a Book of Astronomical Tables, composed and written by Doctor *Edmund Halley*, Our late Regius Professor of Astronomy, and Savilian Professor of Geometry, in Our University of Oxford, intituled, *Edmundi Halleii Astronomi dum viveret Regii Tabulæ Astronomicæ. Accedunt de Usu Tabularum Præcepta*: And that the sole Right and Title of the Copy of the said Book, is vested in him, the said WILLIAM INNYS, wherefore he hath most humbly besought Us to grant him Our Royal Privilege and Licence, for the sole Printing and Publishing the same, for the Term of fourteen Years. We, being willing to give all due Encouragement to Works which may tend to the Advancement of Learning, are graciously pleased to gratify him in his Request; and do, therefore, by these Presents, so far as it may be agreeable to the Statute in that Behalf made and provided, for Us, Our Heirs, and Successors, give and grant unto him, the said WILLIAM INNYS, his Executors, Administrators, and Assigns, Our Royal Licence for the sole Printing and Publishing the said Book, for the Term of fourteen Years, to be computed from the Date hereof; Strictly forbidding all Our Subjects, within Our Kingdoms and Dominions, to reprint the same, either in the like or in any other Volume or Volumes whatsoever; or, to import, buy, vend, utter, or distribute, any Copies thereof, reprinted, beyond the Seas, during the aforesaid Term of fourteen Years, without the Consent or Approbation of the said WILLIAM INNYS, his Heirs, Executors, and Assigns, by Writing under his, or their, Hands and Seals, first had and obtained for that Purpose, as They, and every of Them, offending herein, will answer the contrary at Their Peril; Whereof the Commissioners and other Officers of Our Customs, the Master, Wardens, and Company of Stationers, are to take Notice, That due Obedience may be rendered to Our Pleasure herein declared.

Given at Our Court at Kensington, the Eighth Day of August, 1749, in the Twenty-third Year of Our Reign.

By His Majesty's Command,

HOLLIS NEWCASTLE.



GEORGE R.

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P R A E F A T I O.

PR O D E U N T tandem celeberrimi Halleii Solis & Planetarum Tabulæ; typographo quidem Anno 1717 ab ipso traditæ, Annôque 1719 typis expressæ. Deerant tamen tabulæ quædam vulgares, & Præcepta calculi, cum Auctor Anno 1720 Flamstedii in Observatorio regio Successor constitutus, earum editionem distulit, ut numerorum Lunarium errores ex propriis observationibus detegeret, & eorum Abacum simul cum tabulis in lucem daret. Hoc ut ab Astronomis fieret, diù sanè cupidissimè exoptaverat, ut inde æquationum Lunarium notiorum magnitudines accuratiùs innotescerent, & latentes adhuc æquationes detegerentur. Ipse tandem annum agens sexagesimum quartum, summo corporis & animi vigore fretus, quo ad id ætatis usus erat, opus hoc arduum aggressus est, & præter omnium expectationem absolvit. Observatorium instrumentis astronomicis omnino destitutum acceperat: illa quippe, quibus Flamstedius usus est, privati juris erant, & hæredes sequebantur. Anno tamen 1721 telescopium ad transitus siderum observandos nactus, ascensiones Lunæ rectas per annos quatuor continuos diligentissimè observavit, & cum tabularum suarum computo contulit: donec ingens ille Quadrans anno 1725 sumptibus publicis Observatorii muro affixus, longitudes Lunæ ex observationibus supputandi compotem reddidit; à die igitur Dec. 5to illius Anni, ad diem Dec. 27um anni 1739 longitudes Lunæ observatæ cum computo tabularum collatæ in observationum abaco inveniuntur.

Si Auctor noster has suas tabulas ipse edidisset, procul dubiò de observationibus, quibus ad eas condendas usus est, aliquid dixisset; fortasse etiam numerorum correctiones quasdam indicasset. Hæc quidem à nobis nequaquàm sunt expectanda. Pauca tamen monitum Lectorem volumus, quò magis æquum de illis ferat iudicium.

Flamstedii observationibus præcipuè usus est noster, quæ quamvis magnâ diligentia factæ fuerunt, & summâ fide traditæ, pauciores tamen sunt, quàm quæ ad numeros Solares stabiliendos sufficiant. Hanc observationum inopiam sæpe cum amicis Halleius,
*
dum

dum viveret, questus est. Hinc neque speciem orbitæ terrestris, neque positionem ejus, satis accuratè definire valuit; multò minus æquationes Apogæi solis, & alias quasdam, quibus orbita terrestris minimè immunis est, detegere potuit. Hæ nempe non nisi longâ multarum observationum serie deprehendi & definiri possunt: Adde, quod tùm temporis ignorabantur æquationes Aberrationis luminis fixarum, Præcessionis æquinoctiorum, & Inclinationis axis terræ, quas omnes, mirâ in observando industriâ pariter ac sagacitate, primus detexit summus ille astronomus Rev. Jacobus Bradleyus, S.T.P. R. S. S. in Academiâ Oxoniensi Astronomiæ Professor Savilianus, & Auctori nostro in Observatorio regio Successor dignissimus. Hæ æquationes, licet parvæ sint, errores tamen sensibiles in bonas observationes inducere valent, & Flamstedium mirè torserant. Cùm verò astronomia à Sole tota pendeat, ex erroribus solaribus errores in omnium Planetarum numeris producantur, necesse est.

De Auctoris nostri labore & sollertiâ in tabulis lunaribus condendis, judicabunt ii qui observationum multitudinem pænè infinitam ad tot æquationum magnitudines definiendas necessariam noverint. Et quanto cum candore in hisce suis laboribus cum publico communicandis egerit, exinde patet; quod tabulas hasce tanquam exactas proponere nequaquam cogitavit; quinimò æquationes quasdam penitus omittere voluit, quoniam ad ipsas satis accuratè determinandas, nondum suppeterent observationes idoneæ; tum etiam errorum, quos in tabularum computo per octodecim annorum seriem observatione sedulâ deprehenderat, abacum confecit, & unâ cum tabulis edere decrevit.

Catalogo Britannico ad Lunæ ascensiones rectas ex fixarum observatione indagandas usus est Noster, in quo fixarum quarundam loci minus accuratè determinati inveniuntur; &, si observationum ejus editionem sperare liceret, fixas illas indicare, ut inde Lunæ loci ab illis derivati corrigerentur, operæ pretium foret. Utinam Auctor, dum viveret, illas edidisset; magni enim interest, ut Observationes astronomicæ publici juris fiant, quippe quæ nunquam, ut tabulæ, tractu temporis exolescant, sed si diligenter factæ fuerint & bonâ fide traditæ, majorem utilitatem ex antiquitate ducunt: optandum propterea foret, ut sumptibus publicis subindè ederentur observationes ab Astronomo regio factæ; quo enim magis sedulus observator fuerit, eo magis publici interest ut ejus edantur observationes, eoque

eòque minus privati hominis facultatibus impensæ ad illas edendas necessariæ conveniunt.

Numerorum Mercurialium correctiones edidit Auctor in Reg. Societatis Actis philosoph. N.º 386, ubi Epocham motus medii hujus planetæ ad annum Julianum 1723 ineuntem $\mp 19^{\circ}. 9'. 31''$ statuit; motumque medium in annis Julianis centum $2^{\circ}. 14'. 2''. 13''$, & Nodi ascendentis à primâ stellâ Arietis distantiam $0^{\circ}. 15'. 41''$ invenit.

Satellitum jovialium tabulas Anno 1718 Halleio tradidit edendas Rev. J. Bradleyus. Cum cælo tamen hodie minimè consentire deprehenduntur; quod Auctori non penitus inexpectatum accidisse patet ex ipsius in easdem notis.

Synopsis astronomiæ cometiciæ, eodem tempore quo tabulæ, typis expressa est. Observationum abacum variis temporibus typographo tradidit Auctor, dum observationibus incumberet.

Quid in hisce edendis à nobis præstitum sit, paucis nunc dicendum.

Deerant tabulæ mediarum conjunctionum Lunæ cum Solè, Refractionum, & Longitudinum & Latitudinum Urbium celebriorum; quas omnes suis locis inseruimus.

Tabulas mediarum conjunctionum, & Periodorum lunarium, summâ cum humanitate nobiscum communicavit Rev. J. Bradleyus, à celeberrimo dum viveret Astronomo Rev. Dno. Poundio artificiosissimè constructas. Periodorum lunarium tabula, eclipsium revolutionibus indicandis est utilissima; ideoque abacum eclipsium quæ periodo 223 lunationum ab Anno 1701 ad annum 1718 contigere, quem cum æquationibus ad revolutionum tempora corrigenda, auctor huic usui destinaverat, & Periodum Plinianam* nuncupaverat, omisimus; utpote qui minùs accuratè revolutionum tempora repræsentaret, & post paucas periodos exactas inutilis fiat. Refractionum tabula ea est, quâ semper usus est Auctor. Urbium & Locorum eclipsibus antiquis, vel recentiorum observationibus præcipuè insignium Longitudines & Latitudines in tabulam coniecimus: utinam magis fidas observationes ad earum plerasque stabiliendas haberemus. Elevationem Poli Observatorii Grenovicensis, quâ Flamstædius & Halleius usi sunt, retinuimus, quamvis minutis aliquot secundis verâ minorem eam credamus.

* Vid. Act. Philosoph. n. 194. p. 535.

In præceptis computi tradendis, methodum, quâ Halleius ipse tabulis utebatur, scrupulosè secuti sumus, ne errores diversi ab illis, qui in Abaco inveniuntur, proveniant. Si nempe æquatio Lunæ quarta post æquationem centri applicetur, vel rudis illa argumenti ejus correctio, quam in margine paginae (b) 4 indicavimus, negligatur, errorum differentia ad minuti unius primi semissem quandoque assurgere potest; quod errorum Abacum tabularum correctioni minùs utilem redderet. Hic tamen monendus est Lector, quod ex Halleii chartis comperimus, ipsum, in Limbi Lunæ ascensionibus rectis ex computo inveniendis, & in centri ejus longitudinibus ex observatione indagandis, semidiametro Lunæ apparente, veræ ejus semidiametri loco constanter usum fuisse; indeque factum est, ut ab observationum initio usque ad finem serè anni 1725, à novilunio ad plenilunium dum præcedens Lunæ limbus observabatur, ascensiones ejus rectas ex computo inventas minores quàm oportuit, in Abacum retulerit, & à plenilunio ad novilunium dum limbus sequens observabatur, majores: ab Anno verò 1725, longitudes centri Lunæ ex limbi præcedentis observationibus deductas, veris ejus longitudinibus majores exhibuerit; & ex limbi sequentis observationibus, minores. Error quidem non magnus est, utpote quadrantem minuti unius primi rarò superans; & in computis vulgaribus negligi potest, ideòque mentionem ejus nullam in præceptis fecimus. Quicumque verò motus Lunæ medios corrigere, vel æquationes reformare suscipiat, errores in Abaco inventos, excessu semidiametri Lunæ apparentis secundùm Ascensionem rectam vel secundùm Longitudinem, supra semidiametrum ejus horizontalem secundùm easdem mensuras, corrigere debet.

Brevitati quantum licuit studuimus; methodum tamen ad Longitudes terrestres ex observationibus Lunæ investigandas, in navigantium gratiam pluribus exemplis illustravimus.

De usu Tabularum.

MONITUM I.

De Tempore astronomico.

TEMPUS illud quod apparens appellatur, à centri Solis per meridianum circulum transitu, ad ipsius in eundem meridianum reditum numeratur. In hoc nempe temporis spatio naturalis dies absolvitur. Cùm verò hi dies sint inter se inæquales, motus medii Solis & Planetarum fatis aptè ad eos accommodari nequeunt. Ad tabulas itaque mediorum motuum condendas, finxerunt astronomi diem medium seu æqualem, ad cujus meridiem medios motus in tabulis accommodant. Hunc in sequentibus Meridiem æquatam vocabimus. Si igitur quærat locus Solis vel Planetæ ad tempus quodvis apparens datum, convertendum est illud in tempus medium, opè Tabularum æquationis temporis (C c 3), & ad hoc tempus, medii motus in Tabulis quærendi sunt.

MONITUM II.

De Tabulis Epocharum.

Solis & Planetarum motus medii in Epocharum tabulis, ad meridiem æquatam ultimi diei Decembris anni Juliani proximè præteriti exhibentur. Scilicet Anomalia media Solis in tabula Epocharum ad annum 1722, est ejus Anomalia media ad meridiem illum fictum diei 31 Decembris Anni 1721. Temporis autem computus ad meridiem Observatorii Regii Grenovicensis accommodatus est.

PRÆCEPTA CALCULI SOLIS.

Ad datum tempus Longitudinem Solis veram invenire.

1. E Tabulis *Epocharum* (D d & seq.) & *Mediorum motuum Solis* (D d 3 & seqq.) colligantur Anomalia media & Longitudo Apogæi Solis ad annum, diem, & partem diei datam.

(a)

2. Anomaliæ

2. Anomaliae Solis mediae addatur longitudo Apogaei ejus, earum summa erit Solis longitudo media.

3. In tab. *Aequationum Solis* (E e 3) inveniatur æquatio anomaliae Solis mediae respondens. Hæc à Longitudine ejus mediâ subducta, vel eidem addita, secundum tabulae indicem, dabit veram Solis Longitudinem ad tempus medium tabularum.

4. Si tempus datum fuerit apparens, in tabula *Aequationis Temporis* priori (C c 3) quærat æquatio quæ ad longitudinem Solis veram respondet; in altera, vero *Aequationis temporis* Tabula inveniatur ea quæ ad mediam ejus Anomaliâ; harum summa si ambæ sint addendæ vel subtrahendæ; vel differentia si altera addenda altera subtrahenda fuerit, erit æquatio temporis absoluta, quâ augeatur vel minuatur tempus apparens datum, & ad tempus sic correctum denûo quærat locus Solis. Vel si additione aut subtractione quantitatis motûs medii æquationi temporis absolutæ proportionalis, corrigatur longitudo Solis vera prius inventa, habebitur quam proximè longitudo ejus vera ad tempus apparens datum. Tabula, quæ (C c 4) habetur, *Aequationem* temporis absolutam ad veram Solis Longitudinem exhibet, & ex duabus prioribus componitur. Sed propter motum Apogaei Solis non est perpetua.

EXEMPLUM.

*Quæritur Longitudo Solis vera ad Meridiem 20 diei Januarii
apparentem Anno 1722.*

In *Epocharum* tabula ad annum 1722 habentur Solis Anomalia media $6^{\circ}. 12^{\circ}. 37'. 56''$. & Longitudo Apogaei ejus $3^{\circ}. 8^{\circ}. 0'. 24''$, his addantur motus Anomaliae mediae pro diebus Jan. 20, $0^{\circ}. 19^{\circ}. 42'. 43''$, & Apogaei (cujus motus pro mense completo habetur in imâ tabulâ) $3''$, fit media Solis Anomalia ad meridiem æquatum 20 Januarii $7^{\circ}. 2^{\circ}. 20'. 39''$, & longitudo Apogaei ejus $3^{\circ}. 8^{\circ}. 0'. 27''$. quarum summa $10^{\circ}. 10^{\circ}. 21'. 6''$ est Solis Longitudo media ad idem tempus. Prosthaphæresis Solis ad $7^{\circ}. 2^{\circ}$ Anomaliae mediae est $1^{\circ}. 2'. 47''$, illa vero ad $7^{\circ}. 3^{\circ}$, est $1^{\circ}. 4'. 31''$, earum differentia $1'. 44''$. & cum crescente Solis Anomalia media, crescat etiam æquatio, æquationi harum minori $1^{\circ}. 2'. 47''$ addatur hujus differentiae pars proportionalis $36''$ & fiet $1^{\circ}. 3'. 23''$ Prosthaphæresis Solis ad Anomaliâ mediam $7^{\circ}. 2^{\circ}. 20'. 39''$ respondens, quæ secundum tabulae indicem Longitudini Solis mediae addita dabit $\approx 11^{\circ}. 24'. 29''$ Longitudinem ejus veram ad tabularum tempus medium. Quærat nunc æquatio temporis, ejus pars quæ a Longitudine solis pendet invenietur in tabulâ priori ubi 9 m. 52 s. Longitudini solis $\approx 11^{\circ}. 24'$ respondent; pars altera ad Anomaliâ ejus mediam $7^{\circ}. 2^{\circ}. 20'$ est 4 m. 13 s. & cum ex indicibus tabularum ambæ fiat addendæ earum summa 14 m. 5 s. est æquatio temporis absoluta, quâ tempus apparens auctum in medium convertetur. Ut habeatur igitur Solis vera Longitudo ad meridiem diei propositi apparentem, computus denûo instituendus est ad 14 m. 5 s. post meridiem tabularum æquatum. Vel si Longitudini supra inventæ addatur arcus $35''$ quem Sol spatio temporis 14 m. 5 s. medio suo motu percurrit, fiet $\approx 11^{\circ}. 25'. 4''$. Longitudo ejus vera meridie apparente 20 Januarii Anno 1722, quam proximè.

Diagramma.

Diagramma Calculi.

		☉ Anom. med.				Longit. Apogæi			
		°	'	"	'''	°	'	"	'''
Anno	1722	6	12	37	56	3	8	0	24
Jan.	20	0	19	42	43				3
		7	2	20	39	3	8	0	27
		3	8	0	27				
☉ Long. med.		10	10	21	6				
Prosthaphæresis		+	1	3	23				
☉ Long. vera		≡	11	24	29				
Pro. æq. temp.				+	35				
		≡	11	25	4				

Long. ☉ vera Jan. 20, 1722, quam proximè.

Inventa Solis Longitudine vera, ejus Declinatio in tabula *Declinationum* (B b) habenda est, & Ascensio recta in tabula *Ascensionum rectarum* (B b 2 & seqq.)

PRÆCEPTA CALCULI LUNÆ.

Tempus medium Syzygiarum ad Annum & Mensem datum invenire.

1. E Tabulis *Epocharum mediarum Conjunctionum Solis & Lunæ*, (* E e & seq.) & e Tabulis *Revolutionum Lunæ ad Solem in mensibus anni communis* (* E e 4) colligantur dies & partes diei ad annum & mensem datum, unà cum Anomaliâ Solis mediâ & mediis Solis distantis ab Apogæo Lunæ & Nodo. In annis Biffextilibus, post Februarium numerus dierum in Tabula mensium uno die minuendus est. Si quærat Oppositio, dimidius mensis Synodicus tempori addendus est; & motus huic tempori respondentes, motibus etiam sunt addendi.

2. Ope Anomaliæ Solis mediæ capiantur è tabulis *Æquationum annuarum* (L 1 3 & seq.) *Æquationes Apogæi Lunæ & Nodi*, quæ si secundum indices tabularum addendæ sunt, subducantur a mediis Solis ab Apogæo Lunæ & Nodo distantis, & vice versa; & habebitur ejus distantia ab utroque semel æquato. Prosthaphæresis Solis his addita vel subducta secundum indicem tabulæ dabit Argumentum Lunæ annuum & distantiam veram Solis a Nodo semel æquato.

3. Distantia Solis media ab apogæo Lunæ semel æquato, subducta a mediâ Solis anomaliâ, est in Conjunctionibus argumentum quartæ æquationis Lunæ: verum in Oppositionibus huic Argumento, itemque Argumento annuo, addenda sunt sex signa.

4. In Tabula *Æquationum annuarum Lunæ* (L 1 3 & seq.) inveniatur æquatio ejus annua mediæ Solis Anomaliæ respondens. In tabula *Æquationis semestris alterius* (M m) ope Solis a Nodo distantia, inveniatur æquatio Lunæ tertia. In tabula *Æquationis Lunæ quartæ* (ibid.) inveniatur æquatio quarta ad argumentum huic æquationi proprium. In Tabula demum *Æquationum Lunæ in Syzygiis* (O o 3) inveniatur æquatio ad argumentum annuum respondens. Harum omnium æquationum summa, ubi tempus mediæ syzygiæ cum tempore veræ congruit, (quod rarò fit) Solis Prosthaphæresi æqualis erit. Ubi autem

vera.

vera syzygia mediam præcedit, æquationum Lunarum summa Prosthaphæresin solarem superabit: & ubi media syzygia præcedit veram, Solis Prosthaphæresis summam superabit æquationum Lunarum. Differentia igitur inter hanc summam & Prosthaphæresin solarem, ope Tabulæ *Motus horarii Lunæ a Sole* (* * E e 2) dabit tempus inter syzygiam mediam & veram, quam proximè.]

EXEMPLUM I.

Quæritur tempus medium Novilunii mense Julio Anno 1684.

	Conj. media. D h m s	⊙ Anom. med. s o ' "	⊙ ab Apog. D s o ' "	⊙ à ☿ s o ' "		
1684.	6 13 22 38	6 18 57 15	9 19 6 8	6 0 25 39		
Jun. Biff.	25 4 24 18	5 24 37 56	5 4 54 3	6 4 1 24	1 Æq. D	+ 0 2 41
Julii	1 17 46 56	0 13 35 11	2 24 0 11	0 4 27 3	3a	— 0 0 6
Pro. diff. Æq.	+ 8 54 6	— 2 24 4 47	+ 4 36	— 2 11	4ta	— 0 2 16
8 Julii	2 2 41 2	9 19 30 24	2 24 4 47	0 4 24 52	Æq. in fyz.	— 4 58 24
		Arg. 4. Æq.	— 26 47	— 26 47	Summa	— 4 58 5
					Prosth. ⊙	— 0 26 47
			2 23 38 0	0 3 58 5	Diff.	4 31 18
			Arg. Annuum.	⊙ à ☿	Horæ 8 =	4 3 49
						27 29
					Min. 54 =	27 26
					Sec. 6 =	0 3

Tempus igitur Conjunctionis medium mense Julio
Anno 1684 fuit Die 2. hor. 2. min. 41.

EXEMPLUM II.

Quæritur tempus medium Plenilunii mense Augusto Anno 1681.

	Conj. media. D h m s	Anom. med. s o ' "	⊙ ab Apog. D s o ' "	⊙ a ☿ s o ' "		
1681.	8 22 12 45	6 22 3 19	1 23 52 52	4 5 37 4	1 Æq. Lunæ	+ 0 10 9
Julii	25 17 8 21	6 23 44 15	6 0 43 3	7 4 41 38	3a	+ 0 0 10
½ Mens. syn.	14 18 22 2	0 14 33 10	0 12 54 30	0 15 20 7	4ta	— 0 0 19
Augusti	18 9 43 8	2 0 20 44	8 7 30 25	11 25 38 49	Æq. in fyz.	— 4 40 41
Pro. diff. æq.	+ 5 36	— 8 7 47 37	+ 17 12	— 8 11	Summa	— 4 30 41
8 Aug.	18 15 19	5 22 33 7	8 7 47 37	11 25 30 38	Prosth. ⊙	— 1 40 2
		+ 6	— 1 40 2	— 1 40 2	Diff.	2 50 39
		11 22 33 7	8 6 7 35	11 23 50 36	Horæ 5 =	2 32 23
		Arg. 4ta Æq.	Arg. Ann.	⊙ à ☿	Min. 36 =	18 16
			+ 6			
			2 6 7 35			
			Arg. Æqq. in fyz. 8			

Tempus igitur Oppositionis medium fuit Aug. 18 15 19

Tempora hoc modo inventa paululum a veris syzygiarum temporibus aberrabunt, & corrigenda sunt inveniendò locum Lunæ verum ope *Tabularum Anomalisticarum* (F f & seqq.) per præcepta sequentia.

Locum

Locum Lunæ verum ad datum Conjunctionis vel Oppositionis tempus medium invenire.

1. Inveniatur Longitudo Solis vera ad datum tempus, & capiatur Anomalia ejus media ad minuta tertia.
2. In tabulis *Epocharum mediorum motuum Lunæ existente Terra in Aphelio* (F f & seq.) inveniatur mediæ Longitudines Lunæ, Apogæi ejus, & Nodi, ad tempus Aphelii proxime præcedens tempus datum.
3. E Tabulis *Mediorum motuum ad gradus Anomalie Solis mediæ* (F f 4 & seqq.) capiantur motus medii Lunæ, Apogæi ejus, & Nodi, ad mediam Solis anomaliam respondentes. Addantur hi Lunæ & Apogæi motus, Longitudinibus prioribus, & subducatur ille Nodi a Longitudine priori, & habebimus Lunæ, Apogæi ejus, & Nodi Longitudines ad tempus datum, semel æquatas.
4. Distantia Solis a Nodo Lunæ semel æquato, est argumentum tertiæ æquationis Lunæ, quæ *semestris altera* appellatur (M m). Longitudo Apogæi Solis a Longitudine Apogæi Lunæ subducta, argumentum est quartæ æquationis in Conjunctionibus (ibid); in Oppositionibus autem hoc Argumentum sex Signis augendum est. Argumentum annuum in Conjunctionibus, & idem sex Signis auctum in Oppositionibus est argumentum *Æquationum Lunæ in Syzygiis* (O o 3). Hisce Æquationibus obtinebitur locus Lunæ verus in Orbitâ propriâ.
5. Longitudo Nodi a loco Solis supra invento subducta, Argumentum Latitudinis in Syzygiis appellatur, cujus ope Latitudo Lunæ, & Reductio loci ejus in orbitâ propriâ ad Eclipticam, in *Tabulâ Latitudinariâ Lunæ in Syzygiis* (O o 4) inveniuntur.
6. Si tempus datum ab illo veræ Syzygiæ aberraverit, fatis tutò corrigetur ope *Tabulæ Motus horarii Lunæ a Sole* (* * E e 2).

EXEMPLUM I.

Queritur Locus Lunæ ad tempus Novilunii supra inventum Mens. Jul. die 2. h. 2. min. 41. Anno 1684.

	☉ An. media.	☉ Apogæum.			
	s o ' "'''	s o ' "			
B. 1684	6 12 29 28 46	3 7 21 59			
Jul. 2	6 1 21 2 3	30			
Hor. 2	4 55 41		D ab Æq.	D Apog.	D 8
Min. 41	1 41 1	1684	s o ' "	s o ' "	s o ' "
			9 19 19 19	0 25 25 13	3 17 14 22
☉ An. med.	0 13 57 7 31	Anom. ☉ 13°	5 23 50 19	1 23 46	39 49
Apog.	3 7 22 29	57'	12 42 2	6 27	3 4
		7''	1 33		
		31'''	7		
☉ Long. med.	3 21 19 36				
Prosthaph.	— 27 29		3 25 53 20	0 26 55 26	3 16 31 29
		Æq. 3a	— 0 7	9 19 32 57	0 5 20 38
☉ Long.	3 20 52 7	4ta	— 2 16	Arg. 4ta Æq.	☉ a 8
		Æq. in Syz.	— 4 58 28	2 23 56 41	0 1 "
				Arg. Ann.	0 22 47
			D 3 20 52 29		Lat. D.
			☉ 3 20 52 7		
		Differentia	0 0 0 22		
		(b)			Lunæ

Æquatio temporis absoluta tum temporis fuit $4^m. 58^s$. subducenda; addatur illa tempori medio hic invento, & habebitur $2^h. 45^m. 24^s$. Novilunii veri tempus apparens.

Quæritur locus Lunæ verus ad tempus Plenilunii supra inventum
Aug. 18. 15^h. 19^m. 1681.

Luna igitur ad tempus datum distabat ab oppositione arcu $19''$, quem motu suo medio a Sole, tempore 38 minutorum secundorum percurrit. Fiebat itaque Oppositio vera $15^h. 19^m. 38^s$ temporis medii, quàm proximè.

1. Centuriæ decimæ octavæ nunc currentis, istum Annum felige, qui, si annis ante Christum datis, uno dempto, addatur, integrum efficiet centuriarum numerum.

2. Quærat^{ur} hic numerus in tabula pro *Centuriis annorum* (* * E e) & tempora & motus huic respondent^{es}, a temporibus & motibus, anno isti Centuriæ decimæ octavæ in Epocharum tabulâ (* E e & seqq.) respondentibus subducantur; & obtinebitur tempus primæ conjunctionis mediæ in anno ante Christum dato, cum motibus eidem respondentibus. Quibus datis invenietur tempus Conjunctionis vel Oppositionis in dato mense, per præcepta supra tradita.

E X-

E X E M P L U M.

Quæritur tempus medium Conjunctionis Lunæ cum Sole in mense Maio, anno ante Christum 585.

Annis	584				
Addantur	1716				
Fiunt	2300	Integer Centuriarum numerus.			
		☉ Anom. med.	☉ ab Apog. D	☉ à ☿	
	D h m s	s ° ' "	s ° ' "	s ° ' "	
1716.	12 16 6 46	6 24 41 0	2 12 33 1	2 25 57 37	
2300 subd.	11 5 57 54	11 19 46 54	1 5 58 33	7 25 26 59	
					° ' "
	1 10 8 52	7 4 54 6	1 6 34 28	7 0 30 38	1 Æq. Lunæ + 0 0 5
Maii Biff.	26 15 40 15	4 25 31 37	4 9 5 2	5 3 21 10	3a — 0 0 6
					4ta — 0 0 37
	28 1 49 7	0 0 25 43	5 15 39 30	0 3 51 48	Æq. in Syzygiis — 1 8 35
	+ 2 14 35	6 14 46 4	+ 9	— 4	
			— 51	— 51	Summa — 1 9 13
6 Maij	28 4 3 42	Arg. 4tæ Æq.			☉ Prosthaph. — 0 0 51
			5 15 38 48	0 3 50 53	
			Arg. Annuum.	☉ à ☿	
					1 8 22
					Horæ 2 1 0 57
					Min. 14. sec. 35. 0 7 25

Simili modo invenietur locus Lunæ verus ex tabulis anomalisticis; dum verò motus cæteri pro centuriis annorum subducantur, Longitudo Nodi pro Annorum centuriis, Epochali Longitudini centuriæ decimæ octavæ addenda est. Ut in Exemplo sequenti.

E X E M P L U M.

Quæritur locus Lunæ verus ad tempus medium superiori exemplo inventum.

⊙ Anom. med.		⊙ Apog.		D Long. med.		D Apog.		D ☿	
s ° ' "		s ° ' "		s ° ' "		s ° ' "		s ° ' "	
1716.		6 12 11 41 41		3 7 54 20		7 8 59 37		8 7 35 37	
2300 sub.		11 8 41 42 40		1 8 45 33		5 15 8 35		11 23 42 30	
		7 3 29 59 1		1 29 8 47		1 23 51 2		8 13 53 7	
Maii 28 B		4 26 51 16 20		25					
Hor. 4		9 51 22							
Min. 3. 42 ^s .		9 5							
				⊙ Anom 31'		6 54 26		3 30	
				15" 48'''		3 31		2	
		0 0 31 15 48							
⊙ Apog.		1 29 9 12				2 0 48 59		8 13 56 39	
				Æq. 3a		— 0 0 6		5 15 42 47	
		1 29 40 28		4ta		— 0 0 37		Arg. Annuum	
Prosth.		— 1 2		Æq. in Syz.		— 1 8 15		D Ap. 8 13 56 39	
								⊙ Ap. 1 29 9 12	
		⊙ 1 29 39 26				D 1 29 40 1		6 14 47 27	
						⊙ 1 29 39 26		Arg. 4tæ Æq.	
				Diff.		0 0 0 35			

Luna igitur præterierat Conjunctionem arcu 35^{''}.

Ad

Ad datum quodvis tempus Locum Lunæ invenire.

1. Inveniatur ad tempus datum Longitudo Solis vera.
2. E Tabulis *Epocharum Mediorum motuum Lunæ, Apogæi ejus & Nodi Annis Julianis ineuntibus* (Hh 4 & seq) & e tabulis *Mediorum motuum ad dies mensum, &c.* (Ii 3 & seqq), colligantur ad tempus medium datum, Longitudines, Lunæ, Apogæi ejus, & Nodi, mediæ. Et notandum est, quod medii motus Nodi pro mensibus, diebus, & diei partibus, quibus tempus datum anni ineuntis Epocham superat, subducendi sunt ab ejus Longitudine in Epocharum tabulâ inventâ.
3. In tabulis *Æquationum annuarum* (Ll 3 & seq.) inveniuntur æquationes Lunæ, Apogæi ejus, & Nodi, mediæ Solis Anomalix respondentes, & mediis eorum Longitudinibus addantur, vel ab iis subducantur, secundum tabularum indices.
4. Argumentum secundæ *Æquationis* Lunæ (Mm), (quæ & *Prima semestris* vocatur) est distantia Solis ab Apogæo Lunæ, & Argumentum annuum appellatur.
5. Argumentum tertiæ *Æquationis* (ibid.) (quæ *Semestris altera* nuncupatur) est Solis a Nodo Lunæ distantia.
6. Pro Argumento *quartæ Æquationis* (ibid) Longitudo Apogæi Solis ad Argumentum Annuum addenda, & hæc summa a Lunæ Longitudine jam ter æquatâ subducenda. Cum vero hæc æquatio sit secundum Neutonum sexta, augeri vel minui debet ejus argumentum, æquatione Centri Lunæ. *
7. In tabulâ *Æquationum Apogæi & Excentricitatum Orbis Lunæ* (Mm 2 & seqq) habentur ad Argumentum annuum respondentes, *Æquatio* secunda Apogæi Lunæ, Orbitæ ejus excentricitas, & Logarithmus pro *Æquatione* Centri Lunæ.
8. Longitudo Apogæi Lunæ iterum æquata, subducta a Lunæ Longitudine jam quartum æquatâ, dat ejus Anomaliā mediā; quæ quando sex Signis minor est, Argumentum erit *Tabulæ pro expediendo calculo Centri Lunæ* (Nn & seqq.) si vero sex Signa superaverit, Complemento ejus ad Signa duodecem utendum est. Ex hac tabulâ, ad hoc Argumentum, tum etiam ad Logarithmum pro æquatione Centri Lunæ respondens, capiatur æquatio; quâ augeatur vel minuatur (secundum indicem tabulæ) dimidius angulus mediæ Anomalix (vel ejus complementi ad Signa duodecem); hujus anguli sic correcti tangens logarithmica, logarithmo pro inveniendâ æquatione Centri Lunæ addita, dabit tangentem logarithmicam dimidii Anguli Anomalix veræ. Et differentia inter mediā & veram Anomaliā est æquatio Centri; subducenda quando Lunæ Anomalia mediā sex Signa non superat, si superet addenda.

* Ut corrigatur Argumentum quartæ *Æquationis*, subducatur Longitudo Apogæi semel æquata a Lunæ Longitudine, & capiatur residuum pro Anomaliâ Lunæ mediâ. In tabula *Æquationis Apogæi et Excentricitatis Lunæ* (Mm 2 & seqq) quærat *Logarithmus pro æquatione Centri Lunæ*, qui Tangenti logarithmicæ Anguli dimidii Anomalix Lunæ mediæ addatur. Summa erit tangens Anguli, cujus duplum ab angulo Anomalix mediæ subductum, dabit Argumenti hujus correctionem. Argumento subducenda si Anomalia Lunæ mediā sex Signis minor fuerit, eidem vero addenda si totidem Signa superaverit. In Exemplo sequente

Pro Lunæ Anomalia mediā habebitur	4 18 48	ejus dim.	69 24	10.4249
Log. pro æquatione Centri Lunæ	s o /			9.9422
Angulus cujus duplum est	4 13 32		66 46	10.3671
Correctio detrahenda	— 5 16			

9. A Longitudine Lunæ jam quinquies æquatâ subducatur Solis Longitudo vera, & in tabulâ *Variationis sive Reflectionis Lunæ* (N n 4) inveniatur huic argumento respondens, Variatio Lunæ ad mediam Terræ a Sole distantiam; hujus Logarithmo logist. addatur Logarithmus in tabulâ *Logarithmorum pro correctione Variationis* (ibid) Anomalie mediæ Solis respondens; eorum summa erit Logarithmus logist. Variationis veræ: quâ aucta vel diminuta (secundum tabulæ indicem) Longitudo Lunæ quintum æquata, fiet Longitudo ejus vera in Orbitâ propriâ.

10. In *Tabulâ pro computo Latitudinis Lunæ* (O o) inveniantur, Æquatio Nodi secunda, Sinus maximæ inclinationis logarithmicus & Reductio maxima; omnes ad distantiam Solis a Nodo medio respondentes. Longitudo Nodi jam semel æquata, hâc demum Æquatione aucta vel diminuta, secundum indicem tabulæ, subducta a verâ Lunæ Longitudine in Orbitâ propriâ Argumentum Latitudinis appellatur.

Sinui logarithmico maximæ inclinationis addatur sinus logarithmicus Argumenti Latitudinis; summa, dempto radio, est Latitudinis Lunæ sinus logarithmicus; quæ cum argumentum Latitudinis minus sex Signis fuerit, Borealis est; Australis autem, cum totidem Signa superaverit.

Logarithmo logistico maximæ Reductionis, addatur Sinus dupli argumenti Latitudinis complementum arithmeticum, eorum summa est Logarithmus logistico Reductionis veræ, quæ a Longitudine Lunæ in orbitâ propriâ, in primo & tertio Argumenti Latitudinis quadrante subducta, vel eidem in secundo & quarto addita, dabit Lunæ Longitudinem Eclipticam.

11. In tabulâ *Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) inveniantur Parallaxis tam Anomalie Lunæ veræ, quàm Orbitæ suæ excentricitati respondens, hujus Logarithmus logistico, Logarithmo e *Tabulâ pro Parallaxi extra Syzygiâs ad distantiam Lunæ a Syzygiâ propiore* (ibid.) addatur; eorum summa est Logarithmus logistico Parallaxis Lunæ horizontalis veræ.

12. Parallaxis Lunæ horizontalis, est ad ejus Diametrum, in ratione 60 ad 33. Addendo igitur Logarithmum logist. minorum 33 (2596) Logarithmo logistico Parallaxis Lunæ horizontalis supra inventæ, fit Logarithmus logistico diametri Lunæ horizontalis.

Lunæ Diameter horizontalis aucta in ratione cosinus Latitudinis Lunæ ad Radium mensuram dabit Diametri ejus veræ secundum Longitudinem. Si verò in ratione cosinus Declinationis ad Radium augeatur, ejusdem mensuram dabit secundum Ascensionem rectam.

Diameter Lunæ horizontalis ope tabulæ *Aug. Diam. Lunæ* (O o 5) pro distantia Lunæ a vertice aucta, (prout Luna magis vel minus ab Apogæo suodistaverit) fiet Diameter ejus apparens; quæ aucta in ratione cosinus Latitudinis ad Radium mensuram dabit Diametri apparentis secundum Longitudinem; vel si in ratione cosinus Declinationis ad Radium augeatur, ejusdem mensuram secundum Ascensionem rectam dabit.

E X E M P L U M.

Anno 1725 Dec. 5to, præcedens Lunæ Limbus, observante Halleio Meridia-
num Observatorii Grenovicensis transiit 9^h. 8^m. 5^s temporis medii, cum Ascen-
sione rectâ 42°. 26'. 15'', & Limbi inferioris a vertice distantia 34°. 9'. 15.

Queritur locus Lunæ ad idem tempus secundum Tabulas.

	☉ Anom. med. s o ' "	☉ Apogæum. s o ' "	☉ Long. vcra. s o ' "		
	5 17 20 40	3 8 4 22	8 24 59 2		
	☽ Long. med. s o ' "	☽ Apogæum. s o ' "	☽ Lunæ. s o ' "	Æqq. Argumenta. s o ' "	
1725	8 19 36 54	7 24 56 18	1 13 11 2	5 17 20 ☉ An. med.	
Dec. 5.	4 26 47 52	1 7 46 2	17 57 7	Arg. Æqq. Annuarum.	
Hor. 9	4 56 28	2 30	1 12	8 24 59 2 ☉	
Min. 8. sec. 5.	4 26	2	1	9 2 40 24 ☽ Apog.	
				11 22 18 38	
	1 21 25 40	9 2 44 52	0 25 12 42	Arg. Annuum.	
Æqq. annuæ	+ 2 38	— 4 28	+ 2 7	Excentr. 066429	
Æq. 2 a + 1' 0"	1 21 28 18	9 2 40 24	0 25 14 49	8 24 59 ☉	
3 a — 0 41	— 1 22	— 2 41 0	+ 1 19 7	0 25 15 ☽	
4 a — 1 41				7 29 44	
				Arg. 3æ Æq.	
	1 21 26 56	8 29 59 24	0 26 33 56	3 8 4 ☉ Apog.	
Æq. Centri	— 5 3 56	4 21 27 32	1 15 46 45 ☽	11 22 18 Arg. Ann.	
		☽ Anom. med.		3 0 22	
	1 16 23 0		0 19 12 49	1 21 28 ☽	
+ Variatio	— 36 15	½ Anom. med. o ' "	Arg. Lat.	10 21 6	
				— 5 16 correctio	
	1 15 46 45	70 43 46		10 15 50	
† Reductio	— 4 11	— 1 47		Arg. 4tæ Æq.	
				1 16 23 ☽	
☽ Long. Eclipt	8 15 42 34	70 41 59	tan 10.455683	8 24 59 ☉	
* ☽ Lat. Bor.	1 39 57	Log. pro Æq. centri	9.942214	4 21 24 ☽ à ☉	
				Arg. Variationis.	
		68 11 48	tan 10.397897		
		4° 16 23 36	ejus duplum		
		5 3 56	Æq. Centri subd.		
† ☽ Variatio simplex — 34' 18" LL	2430	† Reductio max. — 6' 44" LL	9499	* Inclin. fin Log.	8 94616
Correctio è tabulâ	9.9758	S. dupl. Arg. Lat.	CA 2065	Arg. Lat. f. Log.	9.51732
☽ Variatio vera — 36 15 LL	2188	Red. vera — 4 11 LL	11564	☽ Lat. bor.	1 39 57 8.46348

Inveniat

Inveniatur nunc ex observatione locus Lunæ verus.

Parallaxis Lunæ horizontalis in Syzygiis ad Anomaliā Lunæ veram $4^{\circ}. 16'. 23''$ & ad excentricitatem 0664 est $60'. 3''$ cujus Logarithmus logisticus est —	— 3	
Ad Distantiam $\triangleright$ à $\odot$ $4^{\circ}. 21'. 24''$ (vel $1^{\circ}. 8'. 36''$ ab Oppositione) logarithmus pro Parallaxi extra Syzygias est	24	$0^{\circ} 1' 11''$
Horum summa est Log. log. Parallaxis horizontalis veræ	21	$= 0^{\circ} 59' 43''$
Cui addendo Logarithmum constantem —	2596	
habemus Log. log. Diametri Lunæ horizontalis —	2617	$= 0^{\circ} 32' 50''$
Lunæ limbi inferioris distantia a vertice observata erat		$34^{\circ} 9' 15''$
addatur Refractio —		$+ 0^{\circ} 36''$
& habebitur distantia ejus à vertice a Refractione purgata logarithmo log. Parallaxis horizontalis veræ, supra invento	21	$34^{\circ} 9' 51''$
addatur compl. arith. sinûs distantiae limbi Lunæ a vertice correctæ —	2506	
summa erit log. log. Parallaxis altitudinis Limbi Lunæ		
* inferioris —	2527	$= 0^{\circ} 33' 32''$
hæc a distantia limbi Lunæ a vertice correctâ, subducta, dabit veram ejus a vertice distantiam —		$33^{\circ} 36' 19''$
subducatur etiam semidiameter Lunæ horizontalis —		$16' 25''$
residuum erit vera centri Lunæ a vertice distantia —		$33^{\circ} 19' 34''$
huic addatur Latitudinis Observatorii complementum		$38^{\circ} 31' 30''$
& habebitur centri Lunæ vera a Polo boreo distantia —		$71^{\circ} 51' 24''$
Logarithmo log. diametri Lunæ horizontalis —	2617	
addatur cosinus log. Declinationis Lunæ —	9778	
summa erit Log. log. veræ diametri Lunæ secundum		
Ascensionem rectam —	2395	$= 0^{\circ} 34' 34''$
Ascensioni rectæ limbi Lunæ præcedentis observatæ —		$42^{\circ} 26' 15''$
addatur semidiameter Lunæ vera secundum Ascensionem rectam		$0^{\circ} 17' 17''$
summa erit Ascensio recta centri Lunæ vera —		$42^{\circ} 43' 32''$

Ascensione Lunæ rectâ $42^{\circ}. 43'. 32''$, & distantia ejus a Polo Boreo $71^{\circ}. 51'. 24''$ datis, inveniatur ejus Longitudo Ecliptica $8^{\circ}. 15'. 42''. 12''$, cum Latitudine Boreâ $1^{\circ}. 38'. 37''$.

* Cum Parallaxis altitudinis fit in ratione sinûs distantiae a Vertice apparentis; si distantia apparens non detur, augenda erit distantia vera ex conjecturâ, & inde quærenda Parallaxis altitudinis. Nempe si distantia a vertice vera pro apparente sumatur, & inde parallaxis altitudinis inveniatur, distantia illa vera hac Parallaxi aucta pro apparente usurpari potest, & Parallaxis inde inventa, a verâ quàm minimùm aberrabit.

De Lunæ computo corrigendo.

Sicubi Tabulæ a cælo longiùs aberrant, corriguntur ope Errorum Abaci, qui in *Observationum tabulis* (a b & seqq) habetur. Errores enim ejusdem ferè magnitudinis post exactum annorum 18 cum diebus 11. 7^h. 43^m. 20^s Periodum recurrent.

Ut igitur invenietur dies in Errorum Abaco tempori culibet dato respondens addatur hæc Periodus (vel ejus multipulum, vel Periodus Lunationum 111, quæ in tabulâ *Periodûm Lunarium* † (** E e 4) habentur) tempori dato, vel ab eodem subducatur, prout tempus illud Annos in Observationum tabulis præcesserit vel secutum fuerit, ut summa vel residuum incidat in annum in illis tabulis inveniendum; & ad diem hoc modo inventum, habebitur in Errorum Abaco, error computi ad tempus datum. Et notandum est, quod harum Periodûm illæ quæ diversum annorum bissextilium numerum admittunt, tempora periodica unius diei spatio feriùs quam oportet quandoque repræsentabunt. Periodus scilicet mensium 223 Synodicorum, est Annorum 18 cum diebus 11, 7^h. 43^m. 20^s, quando non plures 4 Annis bissextilibus in ea numerantur; verùm ubi 5 bissextiles in se continet, complebitur in Annis 18. 10^d. 7^h. 43^m. 20^s.

E X E M P L U M.

*Quæritur tempus transitûs limbi Lunæ sequentis per Meridianum
Grenovicensem Die 28^{va}. Decembris, Anno 1745.*

Subductis a dato tempore annis 18 cum diebus 10 (quinque enim anni biffextiles in hac Periodo numerantur) habebitur Decembris dies 18vus Anni 1727, ad quem diem in Observationum tabulâ inveniatur tempus transitûs limbi lunæ observati $13^h. 45^m. 21^s$. Anni 18 cum diebus 10 a plenâ Perodio $7^h. 43^m. 20^s$ deficiunt; et in hoc temporis spatio, Luna motu suo medio arcum $4^{\circ}. 14'. 22''$ percurrit, qui $16^m. 55^s$ in meridiano transeundo infumit. Subducantur igitur $16^m. 55^s$ a tempore observationis, & habebitur $13^h. 28^m. 26^s$ tempus transitûs limbi Lunæ sequentis per Meridianum Grenovicensem die Decembris 28vo Anni 1745.

Ad hoc tempus Longitudo Lunæ ecliptica secundum tabulas est $\alpha 6^{\circ}.43'.$
 $8''$. Latitudo ejus borea $3^{\circ}.49'.24''$.

In errorum Abaco die Dec. 18. Anni 1727, inveniatur error computi — 3'. 1'', quo Longitudo Lunæ supra inventa aucta, fiet ejus Longitudo correctæ ad tempus datum Ω 6°. 46'. 9''. ° / //

Hinc centri Lunæ Ascensio recta	_____	_____	130	12	38
quæ semidiametro ejus verâ secundum Ascens. rectam aucta				17	18
fiet limbi ejus sequentis Ascensio recta	_____	_____			
Solis Longitudini mediæ ad datum tempus	—	—	288	25	2
addatur arcus dato tempori medio 13 ^h . 28 ^m . 26 ^s pro-					
portionalis	_____	_____	202	6	30
horum summa est Meridiani Ascensio recta	_____		130	31	32
Meridianus igitur limbum Lunæ sequentem prætergressus est arcu			0	1	36
					qui

† Hæc tabula Periodos etiam Nodi complectitur, et utilis est ad Eclipsium revolutiones investigandas.

qui tempore $6\frac{1}{2}$ a Meridiano percurritur, quæ a dato tempore subducta, tempus transitûs limbi Lunæ sequentis darent, si Ascensio ejus recta cum quâ Meridianum transiit immutata mansisset; Luna verò eam $4''$ ferè minutis secundis interea auxerat, quibus arcus supra inventus auctus fiet $1'. 40''$, & limbi transitus ex tempore arcûs hujus descriptionis æstimandus est. Meridianus arcum $1'. 40''$, tempore 7^s ferè, percurrit. Subducantur igitur 7^s a tempore dato & habebitur tempus medium transitûs Limbi Lunæ sequentis $13^h. 28^m. 19^s$, quem Rev. Dnus Bradleius ad $13^h. 28^m. 21^s$. observabat.

De Longitudinum terrestrium investigatione ex observationibus Lunæ.

Observationes huic operi maximè idoneæ, sunt, Appulsus Lunæ ad Stellas fixas; vel, distantia ejus a fixâ quæ non longe distat à parallelo Latitudinis in quo Luna tum versatur; vel denique, Lunæ a Sole distantia in primo vel ultimo mensis quadrante. Ex qualibet harum Observationum, datâ loci ubi illa facta fuerit Latitudine, Meridiani ignoti a Grenovicensi distantia investigari potest. Invento enim tempore quod Grenovici numerabatur cum Observatio facta fuit, ex temporum differentiâ dabitur Meridianorum distantia.

EXEMPLUM.

Anno 1737. Jan. 1. $6^h. 4^m. 30^s$ temporis apparentis (quod in medium conversum fit $6^h. 13^m. 40^s$) sub elevatione Poli borei $65^\circ. 50'. 50''$, Luna stellam γ Tauri occultabat. Quæritur Meridiani ubi observatio fiebat a Grenovicensi distantia.

Dies hic in observationum Tabulis non invenitur; subductâ igitur à dato tempore Lunationum IIII Periodo, habebitur Jan. 11, Anni 1728; ad quem diem errorum Abacus $1'. 18''$ Longitudini tabularum addenda indicat.

Longitudo Stellæ tum temporis, fuit secundum Catalogum Britannicum $\pi 2^\circ. 7'. 0''$, Latitudo ejus Australis $5^\circ. 46'. 22''$.

Pro tempore Grenovicensi capiatur conjectura ex Ephemeridibus quibuscumque Londinensibus; hæ conjunctionem Lunæ cum stellâ ad horam circiter 5tam pomeridianam retulerunt. Longitudo Lunæ ad hoc tempus è tabulis est $\pi 2^\circ. 1'. 20''$, quæ additione $1'. 18''$ correctâ, fit $\pi 2^\circ. 2'. 38''$. Latitudo ejus australis $4^\circ. 50'. 18''$.

Parallaxis Lunæ horizontalis vera	— — —	0 55 41
Longitudini Solis mediæ ad idem tempus	292 11 24	
addatur tempus observationis in Merid. ignoto $6^h. 13^m. 40^s$	93 25 0	
fit Meridiani ignoti Ascensio recta	— — —	25 36 24
Gradus Ecliptici nonagesimus sub. elev. Poli $65^\circ 50'. 50''$	8	24 56 24
Angulus Lunæ parallaëticus	— — —	5 33 2

(d)

Vera

Vera Lunæ à vertice distantia ———— 55 12 54
 Augeatur ex conjecturâ Parallaxi altitudinis ———— + 46
 fiet Lunæ a vertice distantia apparens ———— 55 59 00 ° 1 11
 Lunæ Semidiameter apparens ———— 0 15 28
 Parallaxis altitudinis vera ———— 0 46 10
 * Parallaxis Longitudinis, veræ Longitudini addenda ———— 0 4 28
 Parallaxis Latitudinis, veræ Latitudini addenda ———— 0 45 57
 Locus igitur Centri Lunæ apparens fuit π 2°. 7'. 6'', cum Latitudine australi 5°. 36'. 15''.

Cum vero Lunæ Longitudo visâ, Longitudinem Stellæ 6'' minutis secundis superet, Stellæ occultatio tempus ex Ephemeride assumptum præcessit.

Ad tempus corrigendum, convertatur Lunæ Semidiameter apparens 15'. 28'', ac etiam distantia apparens Centri ejus a Stellâ secundum Latitudinem 10'. 7'', in minuta secunda, & differentia quadratorum harum quantitatum erit 492735'', cujus Radix quadrata 702'' = 11'. 42'', non multum aberrabit à Centri Lunæ distantia apparente a Stellâ, secundum Longitudinem tempore occultationis. augeatur hæc distantia 6'' illis minutis secundis, quibus Centri Lunæ longitudo visâ Stellæ Longitudinem, secundum computum præcedentem, superabat; & è tabulis mediorum motuum Lunæ quærat tempus quo Luna arcum 11'. 48'' percurrit, quod 21^m. 30^s invenietur: quibus a tempore priori 5^h. subductis, instituat computus ad tempus sic correctum 4^h. 38^m. 30^s.

Ad hoc tempus Lunæ longitudo correctâ est π 1°. 51'. 13'', et latitudo ejus australis 4°. 49'. 59''.

Meridiani ignoti Ascensio recta	—————	—————	—————	—————	° 1 11
Gradus Ecliptici nonagesimus	—————	—————	—————	—————	25 35 31
Angulus Lunæ Parallacticus	—————	—————	—————	—————	8 24 55 57
Parallaxis longitudinis, addenda	—————	—————	—————	—————	5 24 32
Parallaxis latitudinis, addenda	—————	—————	—————	—————	0 4 21
Stellæ à centro Lunæ distantia apparens secundum Longitudinem	—————	—————	—————	—————	0 45 57
eorundem distantia apparens, secundum Latitudinem	—————	—————	—————	—————	0 11 26
					0 10 26

Convertatur nunc Lunæ semidiameter apparens 15'. 28'', ac etiam differentia Latitudinum apparens 10'. 26, in minuta secunda. Differentia quadratorum harum quantitatum erit quadratum distantie apparentis Stellæ, in minutis secundis,

* De Parallaxibus hæc sunt notanda.

Dum Luna in partibus cæli ad orientem gradus Ecliptici nonagesimi versatur, Longitudo ejus apparens veram superat; dum vero partes occidentales occupat, Longitudo apparens a verâ deficit.

Simile obtinet in Ascensionibus rectis, prout Luna ad orientem vel ad occidentem Meridiani circuli per Loci verticem transeuntis, sita fuerit.

Quando angulus Lunæ parallacticus à circulo verticali cum circulo Latitudinis factus, major est recto versus Polum Ecliptici a quo Latitudo Lunæ nomen accipit, Latitudo visâ veram superat, & è contra.

Cum angulus Lunæ parallacticus a circulo verticali cum circulo Declinationis factus, major est recto versus polum Æquatoris cui Luna propior est, Declinatio visâ veram superat, & vice versa.

eundis, a circulo Latitudinis per centrum Lunæ transeuntis $11'. 25''$; quæ in ratione cosinûs latitudinis Stellæ ad Radium aucta fiet $11'. 28\frac{1}{2}''$ Stellæ distantia apparens a Lunæ centro secundum Longitudinem, tempore occultationis. Hæc superat distantiam supra inventam $2\frac{1}{2}''$, & tempus adhuc minuendum est.

Longitudo Lunæ apparens tempore ex Ephemeride assumpto (scil. 5^h) fuit $\pi 2^\circ. 7'. 6''$, illa verò tempore correcto ($4^h. 38^m. 30^s$) fuit $\pi 1^\circ. 55'. 34''$, harum differentia $11'. 32''$, est motus Lunæ visibilis spatio temporis $21^m. 30^s$. et.

$$\text{Ut } 11'. 32'' : 2\frac{1}{2}'' :: 21^m. 30^s : 5^s \text{ —.}$$

demptis igitur 5^s de $4^h. 38^m. 30^s$, habebitur $4^h. 38^m. 25^s$ tempus medium Grenovicense quando occultatio sub Meridiano ignoto observabatur. Subducatur hoc tempus a dato observationis tempore medio $6^h. 13^m. 40^s$, residuum $1^h. 35^m. 15^s$, dabit Meridianorum distantiam $23^\circ. 48'. 45''$.

Quoniam verò stellarum occultationes minùs frequenter navigantibus sint observabiles, illorum usui magis commoda videtur distantia Lunæ a Stellâ fixâ, cujus Latitudo non nimium diversa fuerit ab illâ, quam tempore observationis habuerit Luna.

Meridianorum distantia quæsitâ intra tres vel quatuor gradus, ex diariis nauticis plerumque innotescit, et conjectura inde capi potest pro tempore quod Grenovici numerabatur cum observatio facta fuit: Ad quod tempus inveniantur è tabulis Longitudo & Latitudo Lunæ; & Longitudine ex errorum Abaco correctâ, inveniantur etiam Ascensio ejus recta & distantia a Polo; & inde angulus azimuthalis, cum verâ ejus a vertice distantiâ, quæ Parallaxi & Refractione corrigatur in visam. Ad idem tempus inveniantur angulus Stellæ azimuthalis, & distantia ejus a vertice, quæ etiam refractione minuatur.

Hiscæ inventis dabuntur in triangulo Sphærico duo lätëra, Lunæ scilicet & Stellæ a vertice distantiæ visibiles, cum angulo azimuthali inter Lunæ centrum & Stellam, ab illis comprehenso, ad latus tertium inveniendum; quod Lunæ semidiametro diminutum vel auctum, prout limbus ejus propior vel remotior observabatur, arcui observato æquale erit, si tempus Grenovicense rectè sumebatur; sin minùs, ad tempus ex conjecturâ correctum computus denuò instituendus est, & ex collatis erroribus satis tutò corrigetur tempus, & inde habebitur Meridianorum distantia.

EXEMPLUM.

Anno 1725. Dec. 10. $11^h. 14^m$ temporis apparentis, medii verò $11^h. 13^m$, ad occidentem meridiani Grenovicensis, sub Poli borei elevatione gr. 40, stella γ Leonis a limbo Lunæ propiore $20^\circ. 50'$ distare observabatur. Quæritur Meridiani ignoti à Grenovicensi distantia.

Sumatur ex conjecturâ temporum differentia $2^h. 8^m$, quæ tempori observationis addita, dabit $13^h. 21^m$ pro tempore medio Grenovici numerato cum observatio facta fuit.

1725. Dec. 10. 13 ^h . 21 ^m Longitudo Lunæ e tabulis	Ω	4	4	2	0	1	11
Correctio ex errorum Abaco			+	48			
Longitudo Lunæ vera	Ω	4	4	50			
Latitudo ejus borea		5	59	47			
Parallaxis Lunæ horizontalis vera		1	0	18			
Lunæ Ascensio recta		127	42	28			
ejus a Polo boreo distantia		65	52	43			
Meridiani ignoti Ascensio recta		78	46	8			
Angulus Azimuthalis Lunæ cum Meridiano circulo		84	0	10			
Distantia Lunæ a vertice		43	47	7			
Parallaxis altitudinis vera		+	42	16			
Refractio			0	53			
Lunæ à vertice distantia apparens		44	28	30			
Lunæ semidiameter apparens		0	16	47			
Longitudo stellæ γ Leonis	Ω	25	45	00			
Latitudo ejus borea		8	47	27			
ejusdem Ascensio recta		151	11	32			
Stellæ a Polo boreo distantia		68	47	21			
Angulus azimuthalis cum meridiano circulo		96	10	40			
vera Stellæ a vertice distantia		63	22	13			
Refractio			1	46			
Distantia Stellæ a vertice visibilis		63	20	27			
Angulus Azimuthalis inter Stellam & Lunæ Centrum		12	10	30			
Centri Lunæ a Stellâ distantia visibilis		21	13	13			
subducatur Lunæ semidiameter apparens		0	16	47			
habebitur Lunæ limbi propioris a Stella distantia visibilis		20	56	26			
hæc vero arcum observatum superat 6'. 26'', & tempus assumptum correctione indiget.							

Tempori igitur addantur 15^m (Luna enim Stellam versùs progreditur) & ad tempus medium Grenovicense 13^h. 36^m invenietur Longitudo Lunæ correctâ Ω 4°. 14'. 10'', cum Latitudine boreâ 4°. 59'. 40'', & ex inventis iterum Lunæ & Stellæ distantis a vertice visibilibus cum angulo azimuthali comprehenso, invenietur Limbi Lunæ a Stellâ distantia 20°. 47'. 17'' quæ 2'. 43'' ab observatâ deficit. Luna igitur temporis 15^m spatio, motu suo versùs Stellam arcum 9'. 9'' percurrit; et,

$$\text{Ut } 9'. 9'' : 6'. 26'' :: 15^m : 10^m. 33^s.$$

addantur igitur 10^m. 33^s tempori prius assumpto 13^h. 21^m & fiet 13^h. 31^m. 33^s. tempus Grenovicense quæsitum; eritque temporum differentia 2^h. 18^m. 33^s cui proportionalis est arcus 34°. 38'. 15'' Meridianorum distantia quæsitâ.

In hoc Exemplo distantia Lunæ a Stellâ visibilis, sine ambarum a vertice distantis satis accuratè definiri non potuit, propter nimiam in altitudinibus tam diversis refractionum differentiam. Ubi verò earum altitudines non valdè inæquales sunt, *
correctio

* Vid. Acta Philosoph. No. 368. p. 169.

correctio propter Refractiones satis accuratè fiet, si arcus observatus, totidem minutis secundis quot in eo numerantur gradus, augeatur; & ex Parallaxium investigatione computus nonnihil compendiosior reddetur.

E X E M P L U M.

Anno 1725. Dec. 10. 12^h. 50^m temporis medii sub Meridiano ad occidentem Grenovicensis, & Poli borei elevatione gr. 48, Stella β Tauri à limbo Lunæ remotiore 47°. 57'. 12'' distare observabatur. Quæritur Meridiani ignoti a Grenovicensi distantia.

Augeatur arcus observatus propter refractiones 48'', & fiet 47°. 58'.

Sumantur pro temporum differentia 3^h. 44^m. & fiet tempus Grenovicense 16^h. 34^m.

Ad hoc tempus Longitudo Lunæ secundum tabb. est	°	'	''
Correctio ex errorum Abaco	+	0	48
Longitudo Lunæ vera	°	'	''
Latitudo ejus borea			
Parallaxis Lunæ horizontalis vera			
Meridiani ignoti Ascensio recta			
Gradus Ecliptici nonagesimus			
Lunæ Parallaxis Longitudinis, addenda			
Parallaxis Latitudinis, demenda			
Longitudo Lunæ apparens			
Latitudo ejus borea apparens			
Stellæ γ Tauri Longitudo			
ejusdem Latitudo borea			
	°	'	''
	6	4	0
	+	0	48
	6	4	48
	4	58	6
	1	0	12
	103	9	3
	9	40	0
	0	24	38
	0	21	23
	6	29	26
	4	36	43
	18	43	50
	5	21	34

Dantur igitur in triangulo sphærico duo latera, distantia scilicet Lunæ apparens a Polo Ecliptici boreo 85°. 23'. 17'', & distantia Stellæ ab eodem 84°. 38'. 26'', unà cum angulo ab illis comprehenso, differentia scilicet Longitudinum 47°. 45'. 36'', ad latus tertium inveniendum	—	—	—	—	—	47	34	25
quod auctum semidiametro Lunæ apparente	—	—	—	—	—	0	16	48
fiet limbi Lunæ remotioris à Stellâ distantia apparens	—	—	—	—	—	47	51	13
verum arcus ex observatione fuit	—	—	—	—	—	47	58	0
Differentia	—	—	—	—	—	0	6	47

Ex conjecturâ corrigatur tempus. addantur itaque 15^m tempori assumpto & fiet 16^h. 49^m. Longitudo Lunæ correctâ ad hoc tempus invenietur 6°. 14'. 7'', Latitudo ejus borea 4°. 57'. 58''. & Parallaxibus iterum inventis, habebitur ex resolutione trianguli sphærici distantia centri Lunæ apparens à Stellâ 47°. 43'. 51'', quæ semidiametro Lunæ aucta fiet 48°. 0'. 39'', arcum ex observatione inventum 2'. 39'' superans. Et cum horis 16. 34^m distantia Lunæ à Stellâ ab observata deficiebat minutis 6'. 47'', Luna à Stellâ digrediebatur 9'. 26'', spatio temporis 15 minutorum; et

$$\text{Ut } 9'. 26'' : 6'. 47'' :: 15^m : 10^m. 42^s.$$

(e)

addantur

addantur igitur $10^m. 42^s$, tempori ad priorem computum assumpto, & habebitur $16^h. 44^m. 42^s$, tempus medium Grenovici numeratum cum observatio in Meridiano ignoto facta fuit. Et temporum differentiae $3^h. 54^m. 42^s$, arcus $58^\circ. 40'. 30''$ proportionalis est.

Eodem ferè modo ac in exemplis præcedentibus invenietur temporum differentia ex observatâ Lunæ a Sole distantia. Et cum Sol latitudine careat eò magis simplex evadit calculus. Ratio tamen Semidiametri ejus habenda est, quæ arcui ex computo invento addenda vel demenda erit prout Limbus ejus remotior vel propior observabatur. Solis semidiameter invenietur ope tabulæ (O o 5) quæ diametros ejus exhibet Anomalix ejus mediæ respondentes.

PRÆCEPTA CALCULI PLANETARUM QUINQUE.

Ad datum tempus, Planetæ superioris vel inferioris locum invenire.

1. Inveniat Longitudo Solis vera ad tempus datum. Et è Tabulâ *Log. distantiarum Solis a terra* (E e 4), capiatur logarithmus ad mediam Solis anomaliam respondens.

2. E Tabulis *Epocharum & mediorum motuum*, ad tempus datum colligantur, Planetæ, Aphelii ejus, & Nodi, Longitudines mediæ.

3. Aphelii Longitudo a Longitudine Planetæ mediâ subducta, dabit Anomaliam ejus mediam & in tabulâ *Æquationum Planetæ*, inveniat *Æquatio Elliptica* huic respondens, quæ subducta à Longitudine mediâ vel eidem addita, secundum tabulæ indicem, dabit Planetæ Longitudinem heliocentricam in orbitâ propriâ.

4. A Longitudine Planetæ heliocentricâ, subducatur Longitudo Nodi, residuum, Argumentum Latitudinis appellatur; cujus ope in tabulâ *Latitudinariâ Planetæ* inveniantur Orbitæ ejus Inclination, Reductio, & Logarithmus curtationis. Reductio a Planetæ longitudine heliocentricâ subducta, vel eidem addita secundum tabulæ indicem, dat veram ejus Longitudinem heliocentricam in Eclipticâ.

5. E Tabulâ *logarithmorum distantiarum Planetæ a Sole*, capiatur Logarithmus Anomalix Planetæ mediæ respondens, qui Logarithmo curtationis diminutus, fiet logarithmus distantix Planetæ à Sole curtatæ.

6. Planetæ superioris Longitudo heliocentrica a Longitudine Solis, vel Solis Longitudo ab inferioris Planetæ Longitudine subducta, angulus Commutationis appellatur.

7. Differentiæ Logarithmorum distantix Solis a Terra, & distantix Planetæ a Sole, addatur anguli gr. 45 tangens logarithmica, erit summa tangens logarithmica anguli gradus 45 superantis.

Tangenti logarithmicæ excessus auguli hujus supra gr. 45, addatur tangens logarithmica dimidii anguli Commutationis, horum summa erit tangens anguli quo auctus dimidius commutationis angulus Planetæ superioris, vel diminutus si Planetæ

Planeta unus ex inferioribus fit, fiet Angulus qui Elongationis appellatur. Si vero Commutationis angulus dimidijs tria signa superet, augendum vel minuendum erit ejus ad sex signa complementum angulo invento, ut habeatur Elongatio.

8. Si Comutationis angulus sex signis minor fit, Elongatio Planetæ superioris a Solis longitudine subducta, illa verò Planetæ inferioris eidem addita, veram Planetæ Longitudinem geocentricam dabit. Si vero angulus ille sex signa superet contrarium in utrisque faciendum est.

9. Tangens inclinationis Orbitæ Planetæ, est ad tangentem Latitudinis ejusdem geocentricæ, in ratione sinus anguli Commutationis ad finem anguli Elongationis.

EXEMPLUM I.

Quæritur locus Planetæ Veneris geocentricus An. 1690. Jun. 13.
1^h. 17^m₂ temporis medii.

	☉ Anom. med.	☉ Apog.	♀ Long. med.	♀ Apog.	♀ Nodus.	Inclin Bor.
	s o ' "	s o ' "	s o ' "	s o ' "	s o ' "	
1690.	6 12 55 43	3 7 28 3	7 22 26 18	10 6 22 5	2 13 52 43	0 1 "
Jun. 13.	5 11 38 19	0 27	8 22 45 20	25	14	2 58 42
hor. 1	2 28		4 0			
min. 17	42	3 7 28 30	1 8	10 6 22 30	2 13 52 57	
sec. 30	1		2	6 8 54 18	2 1 31 20	
				♀ Med. Anom.	Arg. Latit.	
☉ M. Anom.	11 24 37 13		4 15 16 48			
Apog.	3 7 28 30	Prosthaph.	+ 7 29	Log. dist. terræ à Sole		5.007256
				Log. dist. ♀ a Sole		4.855745
Prosthaph.	3 2 5 43	Reductio	4 15 24 17	Tang. 54 47 51		10.151518
	+ 10 41		— 2 31	— 45 0 0		
☉ Long.	3 2 16 24	♀ Helico.	4 15 21 46	Tang. 9 47 51		9.237255
♀ Elongat.	+ 17 38 40	☉ Subtr.	3 2 16 24	Tang. 21 32 41		9.596391
				Tang. 3 54 1		8.833646
♀ Long. Geoc.	3 19 55 4	Commut.	1 13 5 22			
♀ Lat. Bor.	1 19 21	dimidium	21° 32 41			
				17 38 40 ♀ Elongatio.		
				Commut. 43 5 22	C. Ar	0 16549
				Elong. 17 38 40	Sin.	9.48160
				Inclin. 2 58 42	tan.	8.71624
				♀ Lat. 1 19 21	tan.	8.36333

E. X.

EXEMPLUM. II.

*Quæritur locus Planetæ Jovis Geocentricus An. 1690. Dec. 3.
6^h. 30^m temporis medii.*

	☉ Anom. med.	☉ Apog.	☿ Long. med.	☿ Apog.	☿ Nodus.	Inclin. Austr.
1690.	6 12 55 43	3 7 28 3	11 13 7 16	6 9 21 48	3 7 25 50	0 1 11
Dec. 3	11 2 8 51	0 56	28 0 58	1 6	46	1 18 58
hor. 6	14 47		1 15			
min. 30	1 14	3 7 28 59	6	6 9 22 54	3 7 26 36	
				6 1 46 41	9 3 53 56	
☉ An. med.	5 15 20 35		0 11 9 35	☿ An. med.	Arg. Latit.	
☉ Apog. +	3 7 28 59	☿ Prosthaph.	+ 10 57			
	8 22 49 34		0 11 20 32	Log. dist. ☿ à Sole	5.694521	
Prosthaph.	— 30 2	Reductio	+ 0 4	Log. dist. ☉ à Sole	4.992841	
☉ Long.	8 22 19 32	☿ Long. Heli.	0 11 20 36	Tang. 78 45 31	10.701680	
☿ Elong. +	3 7 39 26	à ☉	8 22 19 32	— 45		
☿ Long. Geoc.	11 29 58 58	Commutatio	8 10 58 56	33 45 31	tang. 9.825034	
Lat. Austr.	1 22 47	femif.	4 5 29 28	54 30 32	tang. 10.146874	
		femifis compl.	54 30 32	43 8 54	tang. 9.971908	
				97 39 26	☿ Elongatio.	
				Commut. 70 58 56	Co. Ar 0.02437	
				Elong. 97 39 26	fin. 9.99611	
				Inclin. 1 18 58	tan. 8.36125	
				Latitud. ☿ 1 22 47	8.38173	

PRÆCEPTA CALCULI SATELLITUM JOVIS.

Distantias apparentes Satellitum a Jovis Centro è terra visas, ad datum tempus invenire.

1. Inveniatur Longitudo Solis vera, unà cum Longitudinibus Planetæ heliocentricâ & geocentricâ, ad tempus datum.

2. E Tabulis *Epocharum & mediorum motuum* (A a a a 3 & seqq) colligantur Satellitum motus medii ad tempus datum, unà cum loco Apfidis Satellitis quarti, qui ab ejus Longitudine mediâ subductus, dabit hujus Satellitis Anomaliâ mediam. In tabulâ *Æquationum Veneris* (U u 2) (cujus orbitæ illa Satellitis quarti ferè similis deprehenditur) ad hanc mediam Anomaliâ inveniatur æquatio, quâ diminuta vel aucta Longitudo media quarti Satellitis, fiet ejus Longitudo vera. Cæterorum trium motus medii *Æquatione* non indigent.

3. De locis Satellitum singulis subducatur Jovis Locus geocentricus, & in tabulâ *Distantiarum apparentium Satellitum a Centro Jovis, in Planetæ semidiametris & semidiametri centissimis* (G g g g). inveniuntur singulorum distantiae apparentes a Centro Jovis, ad hæc residua respondententes. Et cum hoc residuum minus sex signis fuerit, Satelles ad Planetæ partes orientales conspicietur, si vero sex signa superaverit, ad occidentales; ut in indice tabulæ notatur.

Hæc quidem Satellitum distantiae apparentes a centro Jovis, Correctione non egebunt si Jupitur in Perihelio suo & etiam in oppositione ad Solem fuerit. Ad minimam

minimam scilicet Jovis à Terrâ distantiam tabulæ constructæ sunt. In majoribus verò Planetæ à Terrâ distantis, satellites, propter motum luminis progressivum, locos è tabulis inventos seriùs occupare videbuntur. Corrigendum est igitur tempus datum ope tabularum *Æquationum luminis* (F f f f 4).

4. A Solis Longitudine subducatur Longitudo Jovis heliocentrica, & in tabulâ *Æquationum luminis*, inveniatur *Æquatio* huic residuo respondens; quæ augenda est è tabulâ *Correctionum Æquationum luminis* ad Jovis locum heliocentricum; & tempus datum hâc *Æquatione* auctum, erit illud ipsum, quo satellites locos in tabulis inventos occupare videbuntur.

5. Ut igitur habeantur positiones Satellitum ad ipsum tempus datum, æquatio luminis ab illo auferenda est, & computus ad tempus sic correctum instituendus.

EXEMPLUM.

Queruntur distantie Satellitum à Centro Jovis, & eorum positiones meridie æquato Nov. 8. Anno 1719.

	M. Med. 1 ^{mi} .	M M. 2 ^{di} .	M M. 3 ⁱⁱⁱ .	M M. 4 ^{ti} .	Apf. 4 ^{ti} .		
	s o / //	s o / //	s o / //	s o / //	s o /		s o / //
1719.	8 2 18 20	3 18 14 0	10 10 51 58	0 26 38 4	11 9 12	☉	7 26 37 23
Nov. 8.	4 8 33 43	10 8 56 9	7 9 5 57	8 10 11 12	31		
						24 H	5 21 26 56
24 Geoc.	0 10 52 3	1 27 10 9	5 19 57 55	9 6 49 16	11 9 43	24 G	6 0 8 11
	6 0 8 11	6 0 8 11	6 0 8 11	+ 42 33	9 27 6		
						☉ à 24	2 5 11
	6 10 43 52	7 27 1 58	11 19 49 44	9 7 31 49			
				6 0 8 11			
				3 7 23 38		Eq. Lum.	10 28
						Correctio	3 25
	1,1 Occ.	7,89 Occ.	2,64 Occ.	26,17 Ori.			13 53

Hæ sunt Satellitum à Centro Jovis distantie & positiones 13^m. 53^s post meridiem diei Nov. 8vi æquatum. Pro illorum verò locis ad ipsum tempus datum computus institui debet ad 23^h. 46^m. 7^s diei præcedentis. Cum autem Satellitibus dignoscendis præcipuè inserviat hæc computatio, ad quod parvi sit plerumque momenti quadrantis horæ differentia, *Æquationes luminis* hic negligi possunt.

Tempus Eclipsis Satellitis Jovis cujuscunque, quæ proximè post datum tempus est futura, invenire.

1. Ad datum tempus inveniantur Solis Longitudo vera, & Longitudines Jovis heliocentrica & geocentrica.

2. Ex *Epocharum* & *mediorum motuum* tabulis colligantur Satellitis motus medii ad tempus datum. Et, si Quarti Satellitis Eclipsis quærat, corrigenda est Longitudo ejus media *Æquatione Centri Veneris*, ut supra monstratum est.

3. A Longitudine Jovis heliocentricâ in Orbitâ propriâ subducatur Longitudo Nodi Satellitis (qui Anno 1717 fuit $\approx 11^{\circ}.30'$), & in tabulâ *Latitudinariâ Satellitum Jovis* (G g g g 2) inveniatur Reductio huic argumento respondens, quâ Longitudo Jovis aucta vel diminuta, secundum tabulæ indicem, ad Satellitis Orbitam reducetur.

4. A Jovis Longitudine sic reductâ subducatur longitudo Satellitis mediæ, & in tabulâ *Temporis mediis Satellitum motibus &c.* (E e e e & seq) huic residuo respondens inveniatur æquatio, quâ si augeatur tempus datum, habebitur mediæ Eclipsis tempus medium. Quod si non magis unius diei spatio à dato tempore distet, correctione non indigebit; si verò magis distiterit, calculus ad horam unam aut alteram ante tempus mediæ Eclipsis supra inventum, denuò instituendus est.

5. Tempus mediæ Eclipsis sic inventum, Æquatione luminis augendum est.

6. In tabulis *Semidurationum Eclipsium Satellitum Jovis*, (F f f f 2 & seq), ad Jovis à Nodo distantiam, inveniatur Eclipsis semiduratio, quæ à tempore mediæ Eclipsis subducta, Satellitis in Jovis umbram immersionem dabit, & ad idem addita, ejusdem ex umbrâ emerfionem.

EXEMPLUM.

Queritur tempus medium Eclipsis primi Jovis Satellitis proximè futuræ post meridiem Diei Nov. 8vi. æquatum, Anno 1719.

Longitudo Solis vera tunc temporis fuit	—	—	—	7	26	37	23
Longitudo Jovis heliocentrica in Orbitâ propriâ	—	—	—	5	21	25	56
Nodi Satellitis Longitudo, subtrahenda	—	—	—	10	11	30	0
Argumentum Latitudinis	—	—	—	7	9	55	56
Reductio, à Longitudine Jovis subtrahenda	—	—	—	—	—	—	59
Jovis locus ad Orbitam Satellitis reductus	—	—	—	5	21	23	57
Subtrahatur inde Satellitis Longitudo	—	—	—	0	10	52	3
residuum erit, distantia Satellitis à Conjunctione quæsitâ	—	—	—	5	10	31	54
Huic arcui, in tabulâ <i>Temporis medio &c.</i> respondent	—	—	—	18	56	29	
addatur Æquatio Luminis correctâ	—	—	—	+	13	53	
Summa erit tempus medium Conjunctionis apparentis Nov. 8	—	—	—	19	10	22	
Semiduratio Eclipsis	—	—	—	+	1	6	41
				Immerfio	18	3	41
				Emerfio	20	17	3

Notandum est, quod à tempore conjunctionis Jovis cum Sole ad ejusdem ad Solem oppositionem, Satellitis primi immersiones solæ sunt visibiles; ab oppositione verò ad Conjunctionem, emerfiones ejus solummodo videri possunt.

Idem

Idem ferè obtinet, in Satellite secundo; ubi verò Jovis locus heliocentricus est circa medium Tauri, vel Scorpii, & Jupiter eodem tempore in quadraturis ad Solem, hujus tam immerfiones quam emerfiones sunt quandoque visibiles.

Si Solis à loco Jovis heliocentrico distantia major fuerit angulo gr. 45, tertii Satellitis & Immerfiones & Emerfiones sunt visibiles.

Ambo hæc Phænomena in quarto Satellite videre licet, ubi distantia Solis à loco Jovis heliocentrico angulum gr. 24 superat.

Sicubi verò Jovis distantia à Satellitum Nodo alterutro angulum gr. 52 superat, Satelles quartus eclipsin non patietur.

Errata in Præceptis.

P (a) 2, l. 9, post *tera*, dele comma. l. 34, pro *aquatio*, lege *æquatio*. l. 37, post *addendæ*, pone comma. p. (a) 3, l. 10, post *Pro*, dele punctum. l. 16, pro *Solis & Lunæ*, lege *Lunæ cum Sole*. l. 17, pro *seq.*, lege *seqq.*. ibid. pro *Tabulis*, lege *tabulâ*. ibid. & 18 pro *(* E e 4)* lege *(* * E e)*. l. 17, post *subducta* pone comma, & etiam post *tabulæ*. p. (a) 4, l. 22, pro *Anom.* med. lege $\odot$ *Anom.* med. p. (b) l. 8, post *gradus*, adde & *ad minuta*. l. 21, post *invento*, adde in conjunctionibus, vel ab ejus opposito in oppositionibus. In Exemplo, pro *Prosthaph.* lege *Prosthaph.* et in exemplis sequentibus, ferè omnibus, ubi mendosè legitur *Prosthaph.* pro *Prosthaph.* In ejusdem exempli numeris ad dextram, pro 0. 5. 20. 38, lege 0. 4. 20. 38. p. (b) 2, l. 4, pro *min. 42.* sec. 26. lege *min. 40.* sec. 16. l. 6, pro *subducenda*; addatur, lege *addenda*; subducatur. l. 7, pro $45^m. 24^s$, lege $35^m. 18^s$. l. 35, pro *(* * E e)* lege *(* * E e 3)*. p. (b) 4, l. antepen. dele *s o*.

P. (c) post *logarithmus*, pone comma. l. 34, post *dium* pone comma. l. 38, pro *distaverit* lege *distans erit*. l. 29, post *Radium*, pone comma. p. (c) 3, l. 21, pro 33. 19. 34, lege 33. 19. 54. p. (c) 4, l. 4, pro *exactum*, lege *exactam*. l. 6, pro *invenietur*, lege *inveniatur*. ibid. pro *culibet*, lege *cuilibet*. l. 24, pro *Perodio* lege *Periodo*. p. (d) l. 3, pro *mansisset*, lege *mansisset*. p. (d) 2, l. 7, pro *Parrallaxis* lege *Parallaxis*. l. 30, pro *eorundum*, lege *eorundem*. p. (d) 3, l. 1, pro *transeuntis*, lege *transeunte*. p. (e) l. 23, pro γ , lege β . l. antepen. pro *ab observata*, lege *ex computo inventa*, ab *observatâ* *distantiâ*.

P. (e) 2, l. 20, post *mediam*, pone semicolon. l. 37, post *Sole*, adde *curtata*. l. antepen. lege *excessûs*. p. (e) 3, l. 15, pro φ *Apog.* lege φ *Aphel.* In exemplo medio, pro φ *Helico.* lege φ *Helioc.* p. (e) 4, l. 4, pro $\mathcal{A}$ *Apog.* lege $\mathcal{A}$ *Aphel.* l. ult. pro *Jupitur*, lege *Jupiter*. In Indice, p. 1, l. 35, lege *Æquinoctio*. p. 2, l. 10, lege *Æquinoctio*.



T A B U L A R U M

ASTRONOMICARUM

P A R S P R I O R

MOTUS SOLIS LUNÆ

E T

PLANETARUM QUINQUE

E X H I B E N S.



A a

OPUS POSTUMUM
JACOBI KEPLERIS

T A B U L A R U M

ASTRONOMICARUM

PARS PRIOR

MOTUS SOLIS LUNAE

ET

PLANETARUM QUINQUE

EXHIBENS

OPUS POSTUMUM

A 3

*DIFFERENTIÆ TEMPORIS MERIDIANI, ET LONGITUDINES
ab Observatorio Grenovicensi; tum etiam Latitudines Urbium & Locorum
aliquot insignium.*

Locorum nomina	Diff. temp.			Longitudines.				Latitudines.			
	H.	M.	S.	°	'	''		°	'	''	
Alexandria <i>Ægypti</i> - - - -	2	1	6	30	16	30	Or	31	7	0	S
Alexandria ad Iffum. <i>Alexandretta.</i>	2	25	20	36	20	0	Or	36	35	10	S
Araçta. <i>Racca.</i> - - - -	2	35	20	38	50	0	Or	36	1	0	S
Argentoratum. <i>Strasburgh</i> -	0	31	5	7	46	15	Or	48	34	35	S
Athenæ - - - - -	1	35	30	23	52	30	Or	38	5	0	S
Babylon - - - - -	2	51	6	42	46	30	Or	33	0	0	S
Babylon, <i>Ægypti. Cairo.</i> - -	2	5	45	31	26	15	Or	30	2	30	S
Bagdad - - - - -	2	55	6	43	46	30	Or	33	21	0	S
Balafora, <i>apud Ind. orient.</i> - -	5	44	0	86	0	0	Or	21	20	0	S
Berolinum. - - - - -	0	53	50	13	27	30	Or	52	33	0	S
Bonæ spei promontorium - -	1	8	0	17	0	0	Or	34	15	0	M
Bononia - - - - -	0	46	28	11	37	0	Or	44	30	0	S
Buenos Ayres - - - - -	3	52	20	58	5	0	Occ	34	35	0	M
Byzantium - - - - -	1	55	32	28	53	0	Or	41	0	0	S
Carthagera, <i>Americ.</i> - - -	5	0	46	75	11	30	Occ	10	26	0	S
Cayenna, <i>Inf. Americ.</i> - - -	3	51	20	57	50	0	Occ	4	56	0	S
Eboracum novum - - - - -	4	56	36	74	9	0	Occ	40	40	0	S
Fruenburgum - - - - -	1	20	30	20	7	30	Or	54	22	15	S
Gades. <i>Cadix.</i> - - - - -	0	24	28	6	7	0	Occ	36	33	30	S
Gedanum. <i>Dantzic.</i> - - -	1	15	12	18	48	0	Or	54	22	0	S
Goa, <i>apud Ind. orient.</i> - - -	4	55	0	73	45	0	Or	15	31	0	S
Hafnia. <i>Copenhagen.</i> - - -	0	51	0	12	45	0	Or	55	40	45	S
D ^{va} Helenæ <i>Inf.</i> - - - - -	0	24	0	6	0	0	Occ	15	55	0	M
Hierosolyma - - - - -	2	21	20	35	20	0	Or	31	55	0	S
Lima, <i>Peruv.</i> - - - - -	5	8	16	77	4	0	Occ	12	2	35	S
Londinum, <i>ad Divi Pauli.</i> -	0	0	20	0	5	0	Occ	51	30	40	S
Lutetiæ, <i>ad Observatorium.</i> -	0	9	20	2	20	0	Or	48	50	10	S
Macao, <i>Sinarum.</i> - - - - -	7	35	4	113	46	0	Or	22	12	44	S
Maffilia. <i>Marseille.</i> - - -	0	21	29	5	22	15	Or	43	17	45	S
Matritum - - - - -	0	14	58	3	44	30	Occ	40	25	0	S

Locorum nomina	Diff. temp.			Longitudines.			Latitudines.		
	H.	M.	S.	°	'	"	°	'	"
Moscua - - - - -	2	41	20	40	20	0 Or	55	36	0 S
Neapolis - - - - -	0	58	40	14	40	0 Or	40	50	45 S
Norimberga - - - - -	0	44	16	11	4	0 Or	49	26	0 S
OBSERVATORIUM reg. Gren v.	0	0	0	0	0	0	51	28	30 S
Ocrinum prom. <i>The Lizard</i> -	0	19	0	4	45	0 Occ	49	55	0 S
Olyffipo. <i>Lisbon.</i> - - - - -	0	36	50	9	12	30 Occ	38	42	30 S
Oxonium - - - - -	0	5	4	1	16	0 Occ	51	45	0 S
Patavium - - - - -	0	47	42	11	55	30 Or	45	22	26 S
Pekin, <i>Sinarum.</i> - - - - -	7	45	20	116	20	0 Or	39	54	0 S
Petropolis. <i>St Petersburg.</i> -	2	1	20	30	20	0 Or	60	0	0 S
Porto belo, <i>Americ.</i> - - - - -	5	19	20	79	50	0 Occ	9	33	5 S
Praga <i>Bohemicæ</i> - - - - -	0	59	0	14	45	0 Or	50	4	30 S
Quito, <i>Urbs Americ.</i> - - - - -	5	13	20	78	20	0 Occ	0	13	11 M
Roma - - - - -	0	50	0	12	30	0 Or	41	54	0 S
Rupella. <i>Rochelle</i> - - - - -	0	5	4	1	16	0 Occ	46	9	43 S
Sherburne Castle - - - - -	0	4	0	1	0	0 Occ	51	39	25 S
Smyrna - - - - -	1	49	19	27	19	45 Or	38	28	7 S
Tenerifa mons - - - - -	1	6	12	16	33	0 Occ	28	23	27 S
Terra del Gada, <i>in Inf. Madagascar</i>	2	58	0	44	30	0 Or	19	29	0 M
Theſſalonica - - - - -	1	32	32	23	8	0 Or	40	41	10 S
Tornea, <i>Laponicæ</i> - - - - -	1	35	15	23	48	45 Or	65	50	50 S
Venetia - - - - -	0	48	18	12	4	30 Or	45	25	0 S
Vienna, <i>Austriæ</i> - - - - -	1	5	30	16	22	30 Or	48	12	48 S
Vindana portus. <i>Brest.</i> - - - - -	0	18	3	4	30	45 Occ	48	23	0 S
Vitenberga. <i>Witemberg.</i> - - - - -	0	50	14	12	33	30 Or	51	43	10 S
Upsal - - - - -	1	11	0	17	45	0 Or	59	51	50 S
Uraniburgum - - - - -	0	51	26	12	51	30 Or	55	54	15 S
Wanstead - - - - -	0	0	10	0	2	30 Or	51	34	0 S

TAB. DECL.

TABULA DECLINATIONUM PUNCTORUM ECLIPTICÆ.

Sig.	Arietis. Libræ.			Diff.	Tauri. Scorpii.			Diff.	Geminorum Sagittarii.			Diff.	Gr.
Gr.	gr.	'	"	'	"	gr.	'	"	'	"	'	"	Gr.
0	0	0	0	23	54	11	29	33	20	11	15	12	30
1	0	23	54	23	54	11	50	35	20	23	48	12	29
2	0	47	48	23	54	12	11	26	20	35	59	12	28
3	1	11	42	23	53	12	32	4	20	47	47	11	27
4	1	35	34	23	52	12	52	31	20	59	12	11	26
5	1	59	25	23	51	13	12	44	20	10	14	11	25
6	2	23	14	23	49	13	32	45	20	1		10	24
7	2	47	1	23	47	13	52	32	19	47		10	23
8	3	10	45	23	44	14	12	5	19	33		9	22
9	3	34	26	23	41	14	31	24	19	19		9	21
10	3	58	4	23	38	14	50	28	19	4		9	20
11	4	21	38	23	34	15	9	17	18	49		8	19
12	4	45	9	23	31	15	27	51	18	34		8	18
13	5	8	34	23	25	15	46	9	18	18		7	17
14	5	31	55	23	21	16	4	11	18	2		7	16
15	5	55	11	23	16	16	21	57	17	46		6	15
16	6	18	21	23	10	16	39	26	17	29		6	14
17	6	41	26	23	5	16	56	37	17	11		6	13
18	7	4	23	22	57	17	13	31	16	54		5	12
19	7	27	15	22	52	17	30	7	16	36		5	11
20	7	49	59	22	44	17	46	25	16	18		4	10
21	8	12	36	22	37	18	2	24	15	59		4	9
22	8	35	5	22	29	18	18	3	15	39		3	8
23	8	57	26	22	21	18	33	24	15	21		3	7
24	9	19	39	22	13	18	48	25	15	1		2	6
25	9	41	43	22	4	19	3	5	14	40		2	5
26	10	3	37	21	54	19	17	25	14	20		2	4
27	10	25	21	21	44	19	31	25	14	0		1	3
28	10	46	56	21	35	19	45	3	13	38		1	2
29	11	8	20	21	24	19	58	20	13	17		0	1
30	11	29	33	21	13	20	11	15	12	55		0	0
	Virginis.			Diff.	Leonis.			Diff.	Cancr.			Diff.	Gr.
	Piscium.				Aquarii				Capricorni.				

TABULA ASCENSIONUM RECTARUM
PUNCTORUM ECLIPTICÆ.

Sig.	Libra.			Diff.		Scorpii.			Diff.		Sagittarii.			Diff.	
Gr.	gr.	'	"	'	"	gr.	'	"	'	"	gr.	'	"	'	"
0	180	0	0			207	54	9			237	48	36		
				55	2				57	23				62	34
1	180	55	2	55	2	208	51	32	57	31	238	51	10	62	43
2	181	50	4	55	3	209	49	3	57	40	239	53	53	62	53
3	182	45	7	55	4	210	46	44	57	49	240	56	46	63	3
4	183	40	11	55	5	211	44	33	57	59	241	59	49	63	13
5	184	35	16	55	6	212	42	32	58	9	243	3	2	63	22
6	185	30	22	55	8	213	40	41	58	19	244	6	24	63	30
7	186	25	31	55	11	214	39	00	58	28	245	9	54	63	39
8	187	20	42	55	13	215	37	28	58	38	246	13	33	63	48
9	188	15	55	55	16	216	36	6	58	49	247	17	21	63	56
10	189	11	11	55	19	217	34	55	58	59	248	21	18	64	4
11	190	6	31	55	23	218	33	54	59	9	249	25	22	64	12
12	191	1	54	55	26	219	33	3	59	20	250	29	34	64	19
13	191	57	20	55	31	220	32	23	59	30	251	33	53	64	26
14	192	52	51	55	35	221	31	54	59	41	252	38	19	64	33
15	193	48	26	55	39	222	31	35	59	52	253	42	52	64	39
16	194	44	5	55	44	223	31	27	60	3	254	47	31	64	45
17	195	39	50	55	50	224	31	30	60	14	255	52	16	64	51
18	196	35	40	55	56	225	31	43	60	25	256	57	7	64	56
19	197	31	36	56	1	226	32	8	60	36	258	2	3	65	1
20	198	27	37	56	7	227	32	43	60	46	259	7	4	65	5
21	199	23	44	56	14	228	33	30	60	58	260	12	9	65	9
22	200	19	58	56	21	229	34	28	61	8	261	17	18	65	12
23	201	16	19	56	27	230	35	36	61	19	262	22	30	65	16
24	202	12	46	56	34	231	36	55	61	31	263	27	46	65	18
25	203	9	20	56	42	232	38	26	61	41	264	33	4	65	20
26	204	6	2	56	50	233	40	7	61	51	265	38	24	65	22
27	205	2	52	56	58	234	41	58	62	2	266	43	46	65	24
28	205	59	50	57	5	235	44	0	62	13	267	49	10	65	25
29	206	56	55	57	14	236	46	13	62	23	268	54	35	65	25
30	207	54	9			237	48	36			270	0	0		
	♏			Diff.		♏			Diff.		♏			Diff.	

TABULA ASCENSIONUM RECTARUM
PUNCTORUM ECLIPTICÆ.

Sig.	Capricorni.	Diff.		Aquarii.	Diff.		Pisium.	Diff.
Gr.	gr. ' "	' "		gr. ' "	' "		gr. ' "	' "
0	270 00 00	65 25		302 11 24	62 23		332 5 51	57 14
1	271 5 25	65 25		303 13 47	62 12		333 3 5	57 5
2	272 10 50	65 24		304 15 59	62 2		334 0 10	56 58
3	273 16 14	65 22		305 18 1	61 52		334 57 8	56 49
4	274 21 36	65 20		306 19 53	61 41		335 53 57	56 42
5	275 26 56	65 18		307 21 34	61 31		336 50 39	56 35
6	276 32 14	65 16		308 23 5	61 19		337 47 14	56 27
7	277 37 30	65 12		309 24 24	61 8		338 43 41	56 21
8	278 42 42	65 9		310 25 32	60 58		339 40 2	56 13
9	279 47 51	65 5		311 26 30	60 46		340 36 15	56 8
10	280 52 56	65 1		312 27 16	60 36		341 32 23	56 1
11	281 57 57	64 56		313 27 52	60 25		342 28 24	55 56
12	283 2 53	64 51		314 28 16	60 14		343 24 20	55 49
13	284 7 44	64 45		315 28 30	60 3		344 20 9	55 45
14	285 12 28	64 39		316 28 33	59 52		345 15 54	55 40
15	286 17 7	64 33		317 28 25	59 41		346 11 34	55 35
16	287 21 40	64 27		318 28 6	59 31		347 7 9	55 31
17	288 26 7	64 19		319 27 37	59 20		348 2 40	55 26
18	289 30 26	64 12		320 26 57	59 9		348 58 6	55 23
19	290 34 38	64 4		321 26 6	58 59		349 53 29	55 20
20	291 38 42	63 56		322 25 5	58 49		350 48 49	55 16
21	292 42 38	63 48		323 23 54	58 38		351 44 5	55 13
22	293 46 26	63 40		324 22 32	58 28		352 39 18	55 11
23	294 50 6	63 30		325 21 0	58 19		353 34 29	55 8
24	295 53 36	63 22		326 19 19	58 8		354 29 37	55 6
25	296 56 58	63 13		327 17 27	57 59		355 24 44	55 5
26	298 0 11	63 3		328 15 26	57 49		356 19 49	55 4
27	299 3 14	62 53		329 13 16	57 40		357 14 53	55 3
28	300 6 7	62 43		330 10 56	57 32		358 9 56	55 2
29	301 8 50	62 34		331 8 28	57 23		359 4 58	55 2
30	302 11 24			332 5 51			360 0 0	
	♑	Diff.		♒	Diff.		♓	Diff.

TABULA ANGULORUM ECLIPTICÆ CUM MERIDIANO.

Sig.	Arietis. Libra.			Diff.	Tauri. Scorpii.			Diff.	Geminorum Sagittarii.			Diff.	Gr.
Gr.	gr.	'	"	'	"	gr.	'	"	'	"	'	"	Gr.
0	66	31	00	0	11	69	22	51	11	36	77	44	30
1	66	31	11	0	35	69	34	27	11	59	78	6	29
2	66	31	46	0	57	69	46	26	12	20	78	28	28
3	66	32	43	1	21	69	58	46	12	44	78	50	27
4	66	34	4	1	43	70	11	30	13	5	79	13	26
5	66	35	47	2	6	70	24	35	13	27	79	35	25
6	66	37	53	2	30	70	38	2	13	49	79	58	24
7	66	40	23	2	52	70	51	51	14	11	80	21	23
8	66	43	15	3	15	71	6	2	14	33	80	45	22
9	66	46	30	3	38	71	20	35	14	54	81	9	21
10	66	50	8	4	1	71	35	29	15	16	81	32	20
11	66	54	9	4	24	71	50	45	15	37	81	56	19
12	66	58	33	4	47	72	6	22	15	59	82	21	18
13	67	3	20	5	10	72	22	21	16	19	82	45	17
14	67	8	30	5	33	72	38	40	16	40	83	10	16
15	67	14	3	5	55	72	55	20	17	1	83	35	15
16	67	19	58	6	19	73	12	21	17	22	83	59	14
17	67	26	17	6	41	73	29	43	17	41	84	25	13
18	67	32	58	7	4	73	47	24	18	2	84	50	12
19	67	40	2	7	28	74	5	26	18	22	85	15	11
20	67	47	30	7	49	74	23	48	18	41	85	41	10
21	67	55	19	8	13	74	42	29	19	0	86	6	9
22	68	3	32	8	36	75	1	29	19	20	86	32	8
23	68	12	8	8	58	75	20	49	19	39	86	58	7
24	68	21	6	9	21	75	40	28	19	57	87	23	6
25	68	30	27	9	44	76	0	25	20	15	87	49	5
26	68	40	11	10	6	76	20	40	20	34	88	15	4
27	68	50	17	10	28	76	41	14	20	51	88	41	3
28	69	0	45	10	52	77	2	5	21	8	89	7	2
29	69	11	37	11	14	77	23	13	21	25	89	33	1
30	69	22	51			77	44	38			90	0	0
	Virginis.			Diff.	Leonis.			Diff.	Cancr.			Diff.	Gr.
	Pisium.				Aquarii.				Capricorni.				

TABULÆ ÆQUATIONIS TEMPORIS.

Subtrahere ab Apparente.

Locus Solis Verus.

Sig.	Υ	♈	♉	♊	
Gr.	'	"	'	"	'
0	0	0	8 23	8 45	30
1	0	20	8 34	8 35	29
2	0	40	8 44	8 24	28
3	1	0	8 53	8 13	27
4	1	19	9 2	8 1	26
5	1	39	9 10	7 48	25
6	1	58	9 17	7 34	24
7	2	18	9 24	7 20	23
8	2	37	9 30	7 6	22
9	2	56	9 35	6 50	21
10	3	15	9 40	6 35	20
11	3	34	9 44	6 18	19
12	3	52	9 48	6 2	18
13	4	11	9 50	5 44	17
14	4	29	9 52	5 27	16
15	4	46	9 54	5 8	15
16	5	4	9 54	4 50	14
17	5	21	9 54	4 31	13
18	5	37	9 53	4 11	12
19	5	54	9 51	3 52	11
20	6	10	9 49	3 32	10
21	6	25	9 46	3 11	9
22	6	40	9 42	2 51	8
23	6	55	9 38	2 30	7
24	7	9	9 33	2 9	6
25	7	23	9 26	1 48	5
26	7	36	9 19	1 26	4
27	7	48	9 12	1 5	3
28	8	1	9 4	0 43	2
29	8	12	8 55	0 22	1
30	8	23	8 45	0 0	0
	'	"	'	"	Gr.
	♈	♉	♊	♋	Sig.

Adde ad Apparens.

Subtrahere ab Apparente.

Anomalia Solis Media.

Sig.	0	1	2	3	4	5	
Gr.	'	"	'	"	'	"	'
0	0	0	3 48	6 39	7 45	6 47	3 57 30
1	0	8	3 55	6 43	7 45	6 43	3 50 29
2	0	16	4 2	6 47	7 45	6 39	3 43 28
3	0	24	4 9	6 51	7 45	6 35	3 35 27
4	0	32	4 16	6 54	7 45	6 30	3 28 26
5	0	40	4 22	6 58	7 44	6 26	3 20 25
6	0	48	4 29	7 1	7 44	6 21	3 13 24
7	0	56	4 35	7 5	7 43	6 16	3 5 23
8	1	3	4 42	7 8	7 42	6 11	2 58 22
9	1	11	4 48	7 11	7 41	6 6	2 50 21
10	1	19	4 54	7 14	7 40	6 1	2 42 20
11	1	27	5 0	7 17	7 39	5 56	2 34 19
12	1	35	5 7	7 19	7 37	5 51	2 27 18
13	1	42	5 12	7 22	7 36	5 45	2 19 17
14	1	50	5 18	7 25	7 34	5 40	2 11 16
15	1	58	5 24	7 27	7 32	5 34	2 3 15
16	2	6	5 30	7 29	7 30	5 28	1 55 14
17	2	13	5 35	7 31	7 28	5 22	1 47 13
18	2	21	5 41	7 33	7 25	5 16	1 39 12
19	2	28	5 46	7 35	7 23	5 10	1 31 11
20	2	36	5 51	7 36	7 20	5 4	1 22 10
21	2	43	5 57	7 38	7 18	4 58	1 14 9
22	2	51	6 2	7 39	7 15	4 51	1 6 8
23	2	58	6 7	7 41	7 12	4 45	0 58 7
24	3	6	6 12	7 42	7 9	4 38	0 50 6
25	3	13	6 17	7 43	7 5	4 32	0 41 5
26	3	20	6 21	7 43	7 2	4 25	0 33 4
27	3	27	6 26	7 44	6 59	4 18	0 25 3
28	3	34	6 30	7 44	6 55	4 11	0 17 2
29	3	41	6 35	7 45	6 51	4 4	0 8 1
30	3	48	6 39	7 45	6 47	3 57	0 0 0
	'	"	'	"	'	"	Gr.
	11	10	9	8	7	6	Sig.

Adde ad Apparens.

*TABULA ÆQUATIONIS TEMPORIS COMPOSITÆ,
EXISTENTE APOGEO SOLIS in VIII^{to}. CANCRI.*

Sig.	♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓	♈
	Add.	Sub.	Sub.	Add.	Add.	Add.	Sub.	Sub.	Sub.	Sub.	Add.	Add.	
Gr.	' "	' "	' "	' "	' "	' "	' "	' "	' "	' "	' "	' "	' "
0	7 40	1 9	3 56	1 6	5 49	2 14	7 42	15 32	13 29	1 4	11 38	14 26	
1	7 21	1 23	3 52	1 19	5 51	1 58	8 3	15 40	13 13	0 35	11 55	14 20	
2	7 2	1 36	3 47	1 33	5 52	1 41	8 24	15 47	12 56	0 5	12 12	14 13	
3	6 43	1 49	3 43	1 47	5 53	1 24	8 44	15 53	12 38	+ 25	12 27	14 6	
4	6 24	2 1	3 38	2 0	5 53	1 7	9 4	15 58	12 19	0 54	12 41	13 59	
5	6 5	2 13	3 32	2 13	5 52	0 50	9 24	16 2	11 59	1 23	12 54	13 50	
6	5 46	2 23	3 25	2 26	5 51	0 32	9 43	16 5	11 38	1 53	13 7	13 41	
7	5 27	2 34	3 18	2 38	5 49	0 13	10 3	16 8	11 17	2 22	13 20	13 30	
8	5 8	2 44	3 11	2 51	5 47	- 5	10 22	16 10	10 55	2 51	13 32	13 20	
9	4 49	2 53	3 3	3 4	5 44	0 24	10 41	16 11	10 33	3 19	13 43	13 9	
10	4 30	3 2	2 54	3 16	5 40	0 44	11 0	16 11	10 10	3 48	13 53	12 57	
11	4 11	3 10	2 44	3 27	5 35	1 4	11 18	16 11	9 46	4 16	14 2	12 45	
12	3 53	3 17	2 35	3 38	5 30	1 24	11 36	16 10	9 22	4 43	14 11	12 33	
13	3 34	3 25	2 24	3 50	5 24	1 44	11 53	16 8	8 58	5 11	14 19	12 20	
14	3 16	3 32	2 15	4 1	5 17	2 4	12 10	16 5	8 34	5 38	14 25	12 6	
15	2 57	3 39	2 4	4 11	5 10	2 24	12 27	16 1	8 8	6 4	14 31	11 52	
16	2 39	3 45	1 53	4 21	5 2	2 45	12 43	15 57	7 42	6 30	14 36	11 37	
17	2 21	3 50	1 41	4 30	4 54	3 6	12 59	15 52	7 15	6 55	14 40	11 22	
18	2 3	3 54	1 29	4 39	4 45	3 27	13 14	15 46	6 48	7 21	14 43	11 7	
19	1 45	3 57	1 18	4 48	4 36	3 48	13 29	15 39	6 21	7 45	14 46	10 52	
20	1 27	4 0	1 6	4 57	4 26	4 9	13 43	15 32	5 53	8 10	14 48	10 36	
21	1 10	4 2	0 53	5 5	4 15	4 30	13 57	15 24	5 25	8 34	14 49	10 19	
22	0 53	4 4	0 41	5 12	4 4	4 51	14 10	15 14	4 58	8 57	14 50	10 2	
23	0 37	4 6	0 28	5 18	3 52	5 12	14 22	15 3	4 30	9 19	14 50	9 45	
24	0 20	4 6	0 15	5 24	3 39	5 34	14 34	14 51	4 1	9 41	14 49	9 28	
25	0 4	4 6	0 2	5 31	3 27	5 55	14 46	14 39	3 32	10 2	14 47	9 11	
26	- 11	4 5	+ 12	5 36	3 13	6 17	14 56	14 27	3 2	10 23	14 45	8 53	
27	0 26	4 4	0 25	5 40	2 59	6 39	15 6	14 14	2 33	10 42	14 41	8 35	
28	0 41	4 2	0 39	5 43	2 45	7 0	15 15	14 0	2 3	11 1	14 37	8 17	
29	0 56	3 59	0 53	5 46	2 30	7 21	15 24	13 45	1 33	11 20	14 32	7 59	
30	1 9	3 56	1 6	5 49	2 14	7 42	15 32	13 29	1 4	11 38	14 26	7 40	

*Add. ☿ + sunt addenda Tempori apparenti, } ut habeatur Tempus medium.
Sub. ☿ — subtrahenda sunt*

EPOCHÆ MEDIORUM MOTUUM SOLIS
ET PRIMÆ STELLÆ ARIETIS.

Annis Julianis ineun- tibus.	Anomalia Media Solis.					Apog. ☉ 6 gr.		Pr. Vis. Υ 28°		Annis Julianis ineun- tibus.	Anomalia Media Solis.					Apog. ☉ 7 gr.		I ^{ma} *Υ ^{is} . Υ 28 gr.		
	S.	O.	I	II	III	O.	I	I	II		S.	O.	I	II	III	O.	I	II	O.	I
1661	6	13	26	36	52	58	43	26	50	1696	6	12	22	48	37	34	7	56	0	
62	6	13	11	16	29	59	44	27	40	97	6	13	6	36	23	35	7	56	50	
63	6	12	55	56	5	7	0	45	28	30	98	6	12	51	16	0	36	8	57	40
64	6	12	40	35	42	1	45	29	20	99	6	12	35	55	37	37	9	58	30	
1665	6	13	24	23	29	2	46	30	10	1700	6	12	20	35	13	38	9	59	20	
1666	6	13	9	3	6	3	47	31	0	1701	6	13	4	23	0	39	10	29	0	10
67	6	12	53	42	42	4	47	31	50	2	6	12	49	2	37	40	11	1	0	
68	6	12	38	22	19	5	48	32	40	3	6	12	33	42	13	41	11	1	50	
69	6	13	22	10	6	6	49	33	30	4	6	12	18	21	50	42	12	2	40	
1670	6	13	6	49	42	7	49	34	20	1705	6	13	2	9	37	43	13	3	30	
1671	6	12	51	29	19	8	50	35	10	1706	6	12	46	49	14	44	13	4	20	
72	6	12	36	8	56	9	51	36	0	7	6	12	31	28	50	45	14	5	10	
73	6	13	19	56	42	10	51	36	50	8	6	12	16	8	27	46	15	6	0	
74	6	13	4	36	19	11	52	37	40	9	6	12	59	56	14	47	15	6	50	
1675	6	12	49	15	56	12	53	38	30	1710	6	12	44	35	50	48	16	7	40	
1676	6	12	33	55	33	13	53	39	20	1711	6	12	29	15	27	49	17	8	30	
77	6	13	17	43	19	14	54	40	10	12	6	12	13	55	4	50	17	9	20	
78	6	13	2	22	56	15	55	41	0	13	6	12	57	42	50	51	18	10	10	
79	6	12	47	2	33	16	55	41	50	14	6	12	42	22	27	52	19	11	00	
1680	6	12	31	42	9	17	56	42	40	1715	6	12	27	2	4	53	19	11	50	
1681	6	13	15	29	56	18	57	43	30	1716	6	12	11	41	41	54	20	12	40	
82	6	13	0	9	33	19	57	44	20	17	6	12	55	29	27	55	21	13	30	
83	6	12	44	49	9	20	58	45	10	18	6	12	40	9	4	56	21	14	20	
84	6	12	29	28	46	21	59	46	0	19	6	12	24	48	41	57	22	15	10	
1685	6	13	13	16	33	22	59	46	50	1720	6	12	9	28	17	58	23	16	00	
1686	6	12	57	56	10	24	0	47	40	1721	6	12	53	16	4	59	23	16	50	
87	6	12	42	35	46	25	1	48	30	22	6	12	37	55	41	8	0	24	17	40
88	6	12	27	15	23	26	1	49	20	23	6	12	22	35	17	1	25	18	30	
89	6	13	11	3	10	27	2	50	10	24	6	12	7	14	54	2	25	19	20	
1690	6	12	55	42	46	28	3	51	0	1725	6	12	51	2	41	3	26	20	10	
1691	6	12	40	22	23	29	3	51	50	1726	6	12	35	42	18	4	27	21	00	
92	6	12	25	2	0	30	4	52	40	27	6	12	20	21	54	5	27	21	50	
93	6	13	8	49	46	31	5	53	30	28	6	12	5	1	31	6	28	22	40	
94	6	12	53	29	23	32	5	54	20	29	6	12	48	49	18	7	29	23	30	
1695	6	12	38	9	0	33	6	55	10	1730	6	12	33	28	54	8	29	24	20	

EPOCHÆ MEDIORUM MOTUUM SOLIS ET PRIMÆ STELLÆ ARIETIS.

Annis Julianis ineun- tibus.	Anomalia Media Solis.					Apog. ☉ 8 gr.		Pr. γ ^{is} . γ 29°			Annis Julianis ineun- tibus.	Anomalia Media Solis.					Apog. ☉ 8 gr.		I ^{ma} * γ ^{is} . γ 29 gr.		
	S.	O.	I	II	III	I	II	I	II			S.	O.	I	II	III	O.	I	II	O.	I
1731	6	12	18	8	31	9	30	25	10		1766	6	12	13	28	26	44	53	54	20	
32	6	12	2	48	8	10	31	26	0		67	6	11	58	8	2	45	54	55	10	
33	6	12	46	35	54	11	31	26	50		68	6	11	42	47	39	46	55	56	0	
34	6	12	31	15	31	12	32	27	40		69	6	12	26	35	26	47	55	56	50	
1735	6	12	15	55	8	13	33	28	30		1770	6	12	11	15	2	48	56	57	40	
1736	6	12	0	34	45	14	33	29	20		1771	6	11	55	54	39	49	57	58	30	
37	6	12	44	22	31	15	34	30	10		72	6	11	40	34	16	50	57	59	20	
38	6	12	29	2	8	16	35	31	0		73	6	12	24	22	2	51	58	0	0	10
39	6	12	13	41	45	17	35	31	50		74	6	12	9	1	39	52	59	0	1	0
1740	6	11	58	21	21	18	36	32	40		1775	6	11	53	41	16	53	59	1	50	
1741	6	12	42	9	8	19	37	33	30		1776	6	11	38	20	53	55	0	2	40	
42	6	12	26	48	45	20	37	34	20		77	6	12	22	8	39	56	1	3	30	
43	6	12	11	28	21	21	38	35	10		78	6	12	6	48	16	57	1	4	20	
44	6	11	56	7	58	22	39	36	0		79	6	11	51	27	53	58	2	5	10	
1745	6	12	39	55	45	23	39	36	50		1780	6	11	36	7	29	59	3	6	0	
1746	6	12	24	35	22	24	40	37	40		1781	6	12	19	55	16	9	0	3	6	50
47	6	12	9	14	58	25	41	38	30		82	6	12	4	34	53	1	4	7	40	
48	6	11	53	54	35	26	41	39	20		83	6	11	49	14	29	2	5	8	30	
49	6	12	37	42	22	27	42	40	10		84	6	11	33	54	6	3	5	9	20	
1750	6	12	22	21	58	28	43	41	0		1785	6	12	17	41	53	4	6	10	10	
1751	6	12	7	1	35	29	43	41	50		1786	6	12	2	21	30	5	7	11	0	
52	6	11	51	41	12	30	44	42	40		87	6	11	47	1	6	6	7	11	50	
53	6	12	35	28	58	31	45	43	30		88	6	11	31	40	43	7	8	12	40	
54	6	12	20	8	35	32	45	44	20		89	6	12	15	28	30	8	9	13	30	
1755	6	12	4	48	12	33	46	45	10		1790	6	12	0	8	6	9	9	14	20	
1756	6	11	49	27	49	34	47	46	0		1791	6	11	44	47	43	10	10	15	10	
57	6	12	33	15	35	35	47	46	50		92	6	11	29	27	20	11	11	16	0	
58	6	12	17	55	12	36	48	47	40		93	6	12	13	15	6	12	11	16	50	
59	6	12	2	34	49	37	49	48	30		94	6	11	57	54	43	13	12	17	40	
1760	6	11	47	14	25	38	49	49	20		1795	6	11	42	34	20	14	13	18	30	
1761	6	12	31	2	12	39	50	50	10		1796	6	11	27	13	57	15	13	19	20	
62	6	12	15	41	49	40	51	51	0		97	6	12	11	1	43	16	14	20	10	
63	6	12	0	21	25	41	51	51	50		98	6	11	55	41	20	17	15	21	0	
64	6	11	45	1	2	42	52	52	40		99	6	11	40	20	57	18	15	21	50	
1765	6	12	28	48	49	43	53	53	30		1800	6	11	25	0	33	19	16	22	40	

MOTVS ANOMALIÆ MEDIÆ SOLIS
AD DIES MENSIVM.

	JANUARI					FEBRUARI					MARTII					APRILIS				
Die Men- fis.	Anomalia media⊙					Anomalia media⊙					Anomalia media⊙					Anomalia media⊙				
	S.	O.	I	II	III	S.	O.	I	II	III	S.	O.	I	II	III	S.	O.	I	II	III
1	0	0	59	8	10	I	I	32	21	14	I	29	8	9	48	2	29	41	22	52
2	0	1	58	16	20	I	2	31	29	23	2	0	7	17	58	3	0	40	31	2
3	0	2	57	24	29	I	3	30	37	33	2	1	6	26	8	3	1	39	39	11
4	0	3	56	32	39	I	4	29	45	43	2	2	5	34	17	3	2	38	47	21
5	0	4	55	40	49	I	5	28	53	53	2	3	4	42	27	3	3	37	55	31
6	0	5	54	48	59	I	6	28	2	3	2	4	3	50	37	3	4	37	3	41
7	0	6	53	57	9	I	7	27	10	12	2	5	2	58	47	3	5	36	11	51
8	0	7	53	5	18	I	8	26	18	22	2	6	2	6	57	3	6	35	20	0
9	0	8	52	13	28	I	9	25	26	32	2	7	1	15	6	3	7	34	28	10
10	0	9	51	21	38	I	10	24	34	42	2	8	0	23	16	3	8	33	36	20
11	0	10	50	29	48	I	11	23	42	52	2	8	59	31	26	3	9	32	44	30
12	0	11	49	37	58	I	12	22	51	1	2	9	58	39	36	3	10	31	52	40
13	0	12	48	46	7	I	13	21	59	11	2	10	57	47	46	3	11	31	0	49
14	0	13	47	54	17	I	14	21	7	21	2	11	56	55	55	3	12	30	8	59
15	0	14	47	2	27	I	15	20	15	31	2	12	56	4	5	3	13	29	17	9
16	0	15	46	10	37	I	16	19	23	41	2	13	55	12	15	3	14	28	25	19
17	0	16	45	18	47	I	17	18	31	50	2	14	54	20	25	3	15	27	33	29
18	0	17	44	26	56	I	18	17	40	0	2	15	53	28	35	3	16	26	41	38
19	0	18	43	35	6	I	19	16	48	10	2	16	52	36	44	3	17	25	49	48
20	0	19	42	43	16	I	20	15	56	20	2	17	51	44	54	3	18	24	57	58
21	0	20	41	51	26	I	21	15	4	30	2	18	50	53	4	3	19	24	6	8
22	0	21	40	59	36	I	22	14	12	39	2	19	50	1	14	3	20	23	14	18
23	0	22	40	7	45	I	23	13	20	49	2	20	49	9	24	3	21	22	22	27
24	0	23	39	15	55	I	24	12	28	59	2	21	48	17	33	3	22	21	30	37
25	0	24	38	24	5	I	25	11	37	9	2	22	47	25	43	3	23	20	38	47
26	0	25	37	32	15	I	26	10	45	19	2	23	46	33	53	3	24	19	46	57
27	0	26	36	40	25	I	27	9	53	28	2	24	45	42	3	3	25	18	55	7
28	0	27	35	48	34	I	28	9	1	38	2	25	44	50	13	3	26	18	3	16
29	0	28	34	56	44	In Anno Biffex- tilli post Februarium adde unius diei mo- tum.					2	26	43	58	22	3	27	17	11	26
30	0	29	34	4	54						2	27	43	6	32	3	28	16	19	36
31	I	0	33	13	4						2	28	42	14	42					
Mot. Apog.					5	9 49					14 57					19 56				
Mot. * ^{rum}					4	8 5					12 19					16 26				

MOTVS ANOMALIÆ MEDIÆ SOLIS
AD DIES MENSIVM.

	MAII					JUNII					JULII					AUGUSTI				
Die Men- fis.	<i>Anomalia media</i> ⊙					<i>Anomalia media</i> ⊙					<i>Anomalia media</i> ⊙					<i>Anomalia media</i> ⊙				
	S.	O.	I	II	III	S.	O.	I	II	III	S.	O.	I	II	III	S.	O.	I	II	III
1	3	29	15	27	46	4	29	48	40	50	5	29	22	45	44	6	29	55	58	47
2	4	0	14	35	56	5	0	47	48	59	6	0	21	53	53	7	0	55	6	57
3	4	1	13	44	5	5	1	46	57	9	6	1	21	2	3	7	1	54	15	7
4	4	2	12	52	15	5	2	46	5	19	6	2	20	10	13	7	2	53	23	17
5	4	3	12	0	25	5	3	45	13	29	6	3	19	18	23	7	3	52	31	27
6	4	4	11	8	35	5	4	44	21	39	6	4	18	26	33	7	4	51	39	36
7	4	5	10	16	45	5	5	43	29	48	6	5	17	34	42	7	5	50	47	46
8	4	6	9	24	54	5	6	42	37	58	6	6	16	42	52	7	6	49	55	56
9	4	7	8	33	4	5	7	41	46	8	6	7	15	51	2	7	7	49	4	6
10	4	8	7	41	14	5	8	40	54	18	6	8	14	59	12	7	8	48	12	16
11	4	9	6	49	24	5	9	40	2	28	6	9	14	7	22	7	9	47	20	25
12	4	10	5	57	34	5	10	39	10	37	6	10	13	15	31	7	10	46	28	35
13	4	11	5	5	43	5	11	38	18	47	6	11	12	23	41	7	11	45	36	45
14	4	12	4	13	53	5	12	37	26	57	6	12	11	31	51	7	12	44	44	55
15	4	13	3	22	3	5	13	36	35	7	6	13	10	40	1	7	13	43	53	5
16	4	14	2	30	13	5	14	35	43	17	6	14	9	48	11	7	14	43	1	14
17	4	15	1	38	23	5	15	34	51	26	6	15	8	56	20	7	15	42	9	24
18	4	16	0	46	32	5	16	33	59	36	6	16	8	4	30	7	16	41	17	34
19	4	16	59	54	42	5	17	33	7	46	6	17	7	12	40	7	17	40	25	44
20	4	17	59	2	52	5	18	32	15	56	6	18	6	20	50	7	18	39	33	54
21	4	18	58	11	2	5	19	31	24	6	6	19	5	29	0	7	19	38	42	3
22	4	19	57	19	12	5	20	30	32	15	6	20	4	37	9	7	20	37	50	13
23	4	20	56	27	21	5	21	29	40	25	6	21	3	45	19	7	21	36	58	23
24	4	21	55	35	31	5	22	28	48	35	6	22	2	53	29	7	22	36	6	33
25	4	22	54	43	41	5	23	27	56	45	6	23	2	1	39	7	23	35	14	43
26	4	23	53	51	51	5	24	27	4	55	6	24	1	9	49	7	24	34	22	52
27	4	24	53	0	1	5	25	26	13	4	6	25	0	17	58	7	25	33	31	2
28	4	25	52	8	10	5	26	25	21	14	6	25	59	26	8	7	26	32	39	12
29	4	26	51	16	20	5	27	24	29	24	6	26	58	34	18	7	27	31	47	22
30	4	27	50	24	30	5	28	23	37	34	6	27	57	42	28	7	28	30	55	32
31	4	28	49	32	40				II	III	6	28	56	50	38	7	29	30	3	41
	<i>Mot. Apog.</i> 25 5							30	4				35	13				40	23	
	<i>Mot. *</i> _{rum} 20 40							24	46				29	1				33	15	

MOTVS ANOMALIÆ MEDIÆ SOLIS
AD DIES MENSIVM.

	SEPTEMBRIS					OCTOBRIS					NOVEMBRIS					DECEMBRIS.						
Die Men- fis.	<i>Anomalia media</i> ☉					<i>Anomalia media</i> ☉					<i>Anomalia media</i> ☉					<i>Anomalia media</i> ☉						
	s.	o.	i	ii	iii	s.	o.	i	ii	iii	s.	o.	i	ii	iii	s.	o.	i	ii	iii		
1	8	0	29	11	51	9	0	3	16	45	10.	0	36	29	49	11	0	10	34	43		
2	8	1	28	20	I	9	1	2	24	55	10	1	35	37	59	11	1	9	42	53		
3	8	2	27	28	II	9	2	1	33	5	10	2	34	46	9	11	2	8	51	3		
4	8	3	26	36	21	9	3	0	41	15	10	3	33	54	18	11	3	7	59	12		
5	8	4	25	44	30	9	3	59	49	24	10	4	33	2	28	11	4	7	7	22		
6	8	5	24	52	40	9	4	58	57	34	10	5	32	10	38	11	5	6	15	32		
7	8	6	24	0	50	9	5	58	5	44	10	6	31	18	48	11	6	5	23	42		
8	8	7	23	9	0	9	6	57	13	54	10	7	30	26	58	11	7	4	31	52		
9	8	8	22	17	10	9	7	56	22	4	10	8	29	35	7	11	8	3	40	I		
10	8	9	21	25	19	9	8	55	30	13	10	9	28	43	17	11	9	2	48	II		
11	8	10	20	33	29	9	9	54	38	23	10	10	27	51	27	11	10	I	56	21		
12	8	11	19	41	39	9	10	53	46	33	10	11	26	59	37	11	11	I	4	31		
13	8	12	18	49	49	9	11	52	54	43	10	12	26	7	47	11	12	0	12	41		
14	8	13	17	57	59	9	12	52	2	53	10	13	25	15	56	11	12	59	20	50		
15	8	14	17	6	8	9	13	51	11	2	10	14	24	24	6	11	13	58	29	0		
16	8	15	16	14	18	9	14	50	19	12	10	15	23	32	16	11	14	57	37	10		
17	8	16	15	22	28	9	15	49	27	22	10	16	22	40	26	11	15	56	45	20		
18	8	17	14	30	38	9	16	48	35	32	10	17	21	48	36	11	16	55	53	30		
19	8	18	13	38	48	9	17	47	43	42	10	18	20	56	45	11	17	55	I	39		
20	8	19	12	46	57	9	18	46	51	51	10	19	20	4	55	11	18	54	9	49		
21	8	20	11	55	7	9	19	46	0	I	10	20	19	13	5	11	19	53	17	59		
22	8	21	11	3	17	9	20	45	8	II	10	21	18	21	15	11	20	52	26	9		
23	8	22	10	11	27	9	21	44	16	21	10	22	17	29	25	11	21	51	34	19		
24	8	23	9	19	37	9	22	43	24	31	10	23	16	37	34	11	22	50	42	28		
25	8	24	8	27	46	9	23	42	32	40	10	24	15	45	44	11	23	49	50	38		
26	8	25	7	35	56	9	24	41	40	50	10	25	14	53	54	11	24	48	58	48		
27	8	26	6	44	6	9	25	40	49	0	10	26	14	2	4	11	25	48	6	58		
28	8	27	5	52	16	9	26	39	57	10	10	27	13	10	14	11	26	47	15	8		
29	8	28	5	0	26	9	27	39	5	20	10	28	12	18	23	11	27	46	23	17		
30	8	29	4	8	35	9	28	38	13	29	10	29	11	26	33	11	28	45	31	27		
31				II	III	9	29	37	21	39				II	III	11	29	44	39	37		
	<i>Mot. Apog.</i> 45 22						50 32						55 31					I 0 40				
	<i>Mot. *^{rum}</i> 37 22						41 37						45 44					50 0				

MOTVS ANOMALIÆ MEDIÆ ET APOGEI SOLIS,
ET FIXARVM AB ÆQUINOCTIO.

IN ANNORVM CENTURIIS

IN HORIS ET MIN.

Annis Julian. Collect.	Mot. Anom. Media Solis.					Mot. Apog. Solis.			Fixarum ab Æquinoct.			Motus Anomalie Media Solis.											
	S.	O.	I	II	III	O.	I	II	O.	I	II	II	III	III	V	III	III	III	V				
100	II	29	4	25	20	I	41	7	I	23	20	H.	II	III	III	II	II	III	III				
200	II	28	8	50	40	3	22	13	2	46	40	I	I	II	III	I	I	II	III				
300	II	27	13	16	0	5	3	20	4	10	0	2	2	27	50	31	I	16	23				
400	II	26	17	41	20	6	44	27	5	33	20	3	4	55	41	32	I	18	51				
500	II	25	22	6	40	8	25	33	6	56	40	4	7	23	31	33	I	21	19				
600	II	24	26	32	0	10	6	40	8	20	0	5	9	51	22	34	I	23	47				
700	II	23	30	57	20	11	47	47	9	43	20	6	12	19	12	35	I	26	14				
800	II	22	35	22	40	13	28	53	11	6	40	7	14	47	2	36	I	28	42				
900	II	21	39	48	0	15	10	0	12	30	0	8	17	14	53	37	I	31	10				
1000	II	20	44	13	20	16	51	7	13	53	20	9	19	42	43	38	I	33	38				
1100	II	19	48	38	40	18	32	13	15	16	40	10	22	10	34	39	I	36	6				
1200	II	18	53	4	0	20	13	20	16	40	0	11	24	38	24	40	I	38	34				
1300	II	17	57	29	20	21	54	27	18	3	20	12	27	6	14	41	I	41	I				
1400	II	17	I	54	40	23	35	33	19	26	40	13	29	34	5	42	I	43	29				
1500	II	16	6	20	0	25	16	40	20	50	0	14	32	I	55	43	I	45	57				
1600	II	15	10	45	20	26	57	47	22	13	20	15	34	29	46	44	I	48	25				
1700	II	14	15	10	40	28	38	53	23	36	40	16	36	57	36	45	I	50	53				
1800	II	13	19	36	0	30	20	0	25	0	0	17	39	25	27	46	I	53	21				
1900	II	12	24	I	20	32	I	7	26	23	20	18	41	53	17	47	I	55	48				
2000	II	11	28	26	40	33	42	13	27	46	40	19	44	21	7	48	I	58	16				
2100	II	10	32	52	0	35	23	20	29	10	0	20	46	48	58	49	2	0	44				
2200	II	9	37	17	20	37	4	27	30	33	20	21	49	16	48	50	2	3	12				
2300	II	8	41	42	40	38	45	33	31	56	40	22	51	44	39	51	2	5	40				
2400	II	7	46	8	0	40	26	40	33	20	0	23	54	12	29	52	2	8	8				
2500	II	6	50	33	20	42	7	47	34	43	20	24	56	40	19	53	2	10	36				
2600	II	5	54	58	40	43	48	53	36	6	40	25	59	8	10	54	2	13	3				
2700	II	4	59	24	0	45	30	0	37	30	0	26	61	36	0	55	2	15	31				
2800	II	4	3	49	20	47	11	7	38	53	20	27	64	3	51	56	2	17	59				
2900	II	3	8	14	40	48	52	13	40	16	40	28	66	31	41	57	2	20	27				
3000	II	2	12	40	0	50	33	20	41	40	0	29	68	59	31	58	2	22	55				
3100	II	I	17	5	20	52	14	27	43	3	20	30	71	27	22	59	2	25	23				
3200	II	0	21	30	40	53	55	33	44	26	40	31	73	55	12	60	2	27	50				

TABULA EQUATIONUM SOLIS.

Anomalia media Solis.

Gr.	Sig. o. Subtr.			Sig. I. Subtr.			Sig. II. Subtr.			Sig. III. Subtr.			Sig. IV. Subtr.			Sig. V. Subtr.			
	o.	1	11	o.	1	11	o.	1	11	o.	1	11	o.	1	11	o.	1	11	
0	0	0	0	0	57	7	1	39	41	1	56	19	1	41	48	0	59	15	30
1	0	1	59	0	58	51	1	40	42	1	56	20	1	40	48	0	57	26	29
2	0	3	59	1	0	33	1	41	41	1	56	19	1	39	46	0	55	37	28
3	0	5	58	1	2	15	1	42	39	1	56	16	1	38	41	0	53	48	27
4	0	7	57	1	3	55	1	43	35	1	56	12	1	37	35	0	51	57	26
5	0	9	56	1	5	35	1	44	29	1	56	5	1	36	27	0	50	5	25
6	0	11	55	1	7	14	1	45	21	1	55	56	1	35	17	0	48	13	24
7	0	13	53	1	8	51	1	46	11	1	55	45	1	34	5	0	46	19	23
8	0	15	51	1	10	27	1	47	0	1	55	31	1	32	52	0	44	25	22
9	0	17	49	1	12	1	1	47	46	1	55	15	1	31	37	0	42	30	21
10	0	19	47	1	13	35	1	48	31	1	54	58	1	30	20	0	40	34	20
11	0	21	45	1	15	7	1	49	13	1	54	38	1	29	1	0	38	37	19
12	0	23	42	1	16	38	1	49	53	1	54	16	1	27	41	0	36	40	18
13	0	25	38	1	18	7	1	50	32	1	53	52	1	26	19	0	34	41	17
14	0	27	35	1	19	36	1	51	9	1	53	26	1	24	55	0	32	42	16
15	0	29	30	1	21	3	1	51	44	1	52	58	1	23	30	0	30	43	15
16	0	31	25	1	22	28	1	52	17	1	52	27	1	22	3	0	28	43	14
17	0	33	20	1	23	51	1	52	48	1	51	55	1	20	35	0	26	42	13
18	0	35	14	1	25	14	1	53	16	1	51	20	1	19	5	0	24	41	12
19	0	37	8	1	26	35	1	53	43	1	50	44	1	17	33	0	22	39	11
20	0	39	1	1	27	55	1	54	7	1	50	5	1	16	0	0	20	37	10
21	0	40	53	1	29	13	1	54	30	1	49	24	1	14	26	0	18	34	9
22	0	42	44	1	30	29	1	54	50	1	48	42	1	12	50	0	16	31	8
23	0	44	35	1	31	43	1	55	9	1	47	57	1	11	13	0	14	28	7
24	0	46	25	1	32	56	1	55	25	1	47	11	1	9	34	0	12	24	6
25	0	48	14	1	34	8	1	55	39	1	46	22	1	7	54	0	10	21	5
26	0	50	2	1	35	18	1	55	51	1	45	31	1	6	13	0	8	17	4
27	0	51	50	1	36	26	1	56	1	1	44	38	1	4	31	0	6	13	3
28	0	53	36	1	37	33	1	56	9	1	43	43	1	2	47	0	4	9	2
29	0	55	22	1	38	38	1	56	15	1	42	47	1	1	2	0	2	4	1
30	0	57	7	1	39	41	1	56	19	1	41	48	0	59	15	0	0	0	0
	Sig. XI. Adde.			Sig. X. Adde.			Sig. IX. Adde.			Sig. VIII. Adde.			Sig. VII. Adde.			Sig. VI. Adde.			Gr.

LOGARITHMI DISTANTIARUM SOLIS A TERRA.

Anomalia media Solis.

	Sig. o.	Sig. I.	Sig. II.	Sig. III.	Sig. IV.	Sig. V.	
Gr.	Logar.	Logar.	Logar.	Logar.	Logar.	Logar.	
0	5 007286	5 006347	5 003749	5 000124	4 996405	4 993620	30
1	5 007285	5 006284	5 003640	4 999995	4 996292	4 993555	29
2	5 007282	5 006220	5 003531	4 999867	4 996180	4 993491	28
3	5 007277	5 006154	5 003420	4 999739	4 996069	4 993429	27
4	5 007269	5 006087	5 003307	4 999611	4 995959	4 993369	26
5	5 007260	5 006018	5 003194	4 999483	4 995850	4 993311	25
6	5 007249	5 005946	5 003080	4 999354	4 995742	4 993255	24
7	5 007235	5 005872	5 002965	4 999227	4 995636	4 993201	23
8	5 007218	5 005797	5 002849	4 999099	4 995531	4 993150	22
9	5 007200	5 005720	5 002732	4 998971	4 995427	4 993102	21
10	5 007180	5 005642	5 002614	4 998844	4 995325	4 993055	20
11	5 007158	5 005562	5 002495	4 998717	4 995224	4 993009	19
12	5 007134	5 005480	5 002375	4 998590	4 995126	4 992966	18
13	5 007107	5 005397	5 002254	4 998463	4 995028	4 992926	17
14	5 007079	5 005312	5 002134	4 998336	4 994932	4 992888	16
15	5 007048	5 005225	5 002012	4 998210	4 994836	4 992852	15
16	5 007015	5 005136	5 001890	4 998084	4 994743	4 992818	14
17	5 006980	5 005047	5 001767	4 997960	4 994652	4 992786	13
18	5 006943	5 004956	5 001643	4 997837	4 994562	4 992757	12
19	5 006905	5 004863	5 001518	4 997714	4 994474	4 992731	11
20	5 006864	5 004768	5 001393	4 997591	4 994387	4 992706	10
21	5 006821	5 004672	5 001268	4 997468	4 994302	4 992683	9
22	5 006776	5 004575	5 001142	4 997347	4 994219	4 992663	8
23	5 006730	5 004477	5 001016	4 997226	4 994138	4 992646	7
24	5 006681	5 004377	5 000889	4 997106	4 994058	4 992631	6
25	5 006630	5 004275	5 000762	4 996987	4 993980	4 992618	5
26	5 006577	5 004173	5 000635	4 996868	4 993904	4 992607	4
27	5 006522	5 004069	5 000508	4 996750	4 993831	4 992599	3
28	5 006466	5 003963	5 000380	4 996634	4 993759	4 992593	2
29	5 006408	5 003857	5 000252	4 996519	4 993688	4 992590	1
30	5 006347	5 003749	5 000124	4 996405	4 993620	4 992589	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

<i>Annis Julia- nis in- eunti- bus.</i>	<i>Temp primæ Conj. Med. in Mens. Jan.</i>				<i>Anomalie Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
	D.	H.	M.	S.	S	°	'	"	S	°	'	"	S	°	'	"
1661	19	20	52	12	7	3	1	37	5	7	8	5	3	19	59	42
62	9	5	40	49	6	22	17	29	3	16	56	10	3	28	2	29
63	28	3	13	28	7	10	39	41	2	22	33	16	5	6	45	30
64	17	12	2	5	6	29	55	33	1	2	21	21	5	14	48	18
65	5	20	50	41	6	19	11	26	11	12	9	26	5	22	51	5
1666	24	18	23	21	7	7	33	37	10	17	46	32	7	1	34	6
67	14	3	11	58	6	26	49	30	8	27	34	37	7	9	36	53
68	3	12	0	34	6	16	5	22	7	7	22	42	7	17	39	40
69	21	9	33	14	7	4	27	33	6	12	59	48	8	26	22	42
70	10	18	21	51	6	23	43	26	4	22	47	53	9	4	25	28
1671	0	3	10	27	6	12	59	18	3	2	35	59	9	12	28	15
72	19	0	43	7	7	1	21	30	2	8	13	4	10	21	11	17
73	7	9	31	43	6	20	37	22	0	18	1	9	10	29	14	5
74	26	7	4	23	7	8	59	34	11	23	38	15	0	7	57	5
75	15	15	53	0	6	28	15	26	10	3	26	20	0	15	59	53
1676	5	0	41	36	6	17	31	19	8	13	14	25	0	24	2	39
77	22	22	14	16	7	5	53	30	7	18	51	31	2	2	45	41
78	12	7	2	53	6	25	9	22	5	28	39	36	2	10	48	28
79	1	15	51	29	6	14	25	15	4	8	27	42	2	18	51	15
80	20	13	24	9	7	2	47	26	3	14	4	47	3	27	34	17
1681	8	22	12	45	6	22	3	19	1	23	52	52	4	5	37	4
82	27	19	45	25	7	10	25	30	0	29	29	58	5	14	20	5
83	17	4	34	2	6	29	41	23	11	9	18	3	5	22	22	52
84	6	13	22	38	6	18	57	15	9	19	6	8	6	0	25	39
85	24	10	55	17	7	7	19	27	8	24	43	14	7	9	8	41
1686	13	19	43	55	6	26	35	18	7	4	31	19	7	17	11	27
87	3	4	32	31	6	15	51	11	5	14	19	25	7	25	14	14
88	22	2	5	11	7	4	13	22	4	19	56	30	9	3	57	16
89	10	10	53	47	6	23	29	14	2	29	44	35	9	12	0	4
90	29	8	26	27	7	11	51	26	2	5	21	41	10	20	43	4
1691	18	17	15	4	7	1	7	19	0	15	9	46	10	28	45	51
92	8	2	3	40	6	20	23	11	10	24	57	51	11	6	48	38
93	25	23	36	19	7	8	45	24	10	0	34	57	0	15	31	40
94	15	8	24	57	6	28	1	14	8	10	23	2	0	23	34	27
1695	4	17	13	33	6	17	17	6	6	20	11	8	1	1	37	14

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

<i>Annis Julia- nis in- eunti- bus.</i>	<i>Temp. primæ Conj. Med. in Mens. Jan.</i>				<i>Anomalie Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
	D.	H.	M.	S.	S	°	'	"	S	°	'	"	S	°	'	"
1696	23	14	46	13	7	5	39	18	5	25	48	13	2	10	20	16
97	11	23	34	49	6	24	55	10	4	5	36	18	2	18	23	3
98	1	8	23	26	6	14	11	2	2	15	24	24	2	26	25	50
99	20	5	56	6	7	2	33	14	1	21	1	29	4	5	8	51
1700	9	14	44	42	6	21	49	7	0	0	49	34	4	13	11	37
1701	27	12	17	21	7	10	11	20	11	6	26	41	5	21	54	40
2	16	21	5	58	6	29	27	12	9	16	14	46	5	29	57	27
3	6	5	54	34	6	18	43	4	7	26	2	51	6	8	0	14
4	25	3	27	14	7	7	5	16	7	1	39	57	7	16	43	15
5	13	12	15	51	6	26	21	8	5	11	28	2	7	24	46	2
1706	2	21	4	27	6	15	37	0	3	21	16	7	8	2	48	49
7	21	18	37	7	7	3	59	12	2	26	53	13	9	11	31	50
8	11	3	25	44	6	23	15	4	1	6	41	18	9	19	34	37
9	29	0	58	23	7	11	37	16	0	12	18	24	10	28	17	39
10	18	9	47	0	7	0	53	8	10	22	6	29	11	6	20	26
1711	7	18	35	36	6	20	9	1	9	1	54	34	11	14	23	14
12	26	16	8	16	7	8	31	12	8	7	31	40	0	23	6	15
13	15	0	56	53	6	27	47	5	6	17	19	45	1	1	9	1
14	4	9	45	29	6	17	2	56	4	27	7	50	1	9	11	49
15	23	7	18	9	7	5	25	9	4	2	44	56	2	17	54	49
1716	12	16	6	46	6	24	41	0	2	12	33	1	2	25	57	37
17	1	0	55	22	6	13	56	54	0	22	21	6	3	4	0	25
18	19	22	28	2	7	2	19	6	11	27	58	12	4	12	43	25
19	9	7	16	38	6	21	34	58	10	7	46	17	4	20	46	13
20	28	4	49	18	7	9	57	10	9	13	23	23	5	29	29	14
1721	16	13	37	54	6	29	13	2	7	23	11	28	6	7	32	2
22	5	22	26	31	6	18	28	54	6	2	59	33	6	15	34	48
23	24	19	59	11	7	6	51	6	5	8	36	39	7	24	17	49
24	14	4	47	48	6	26	6	58	3	18	24	44	8	2	20	36
25	2	13	36	24	6	15	22	50	1	28	12	49	8	10	23	25
1726	21	11	9	4	7	3	45	2	1	3	49	55	9	19	6	25
27	10	19	57	40	6	23	0	55	11	13	38	0	9	27	9	12
28	0	4	46	17	6	12	16	47	9	23	26	6	10	5	11	59
29	18	2	18	57	7	0	38	59	8	29	3	11	11	13	55	1
1730	7	11	7	33	6	19	54	50	7	8	51	16	11	21	57	47

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis ineuntibus.

<i>Annis Julia- nis in- eunti- bus.</i>	<i>Temp. primæ Conj. Med. in Mens. Jan.</i>				<i>Anomaliz Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
	D.	H.	I	II	S	°	I	II	S	°	I	II	S	°	I	II
1731	26	8	40	13	7	8	17	3	6	14	28	22	1	0	40	49
32	15	17	28	50	6	27	32	54	4	24	16	27	1	8	43	36
33	4	2	17	26	6	16	48	47	3	4	4	32	1	16	46	24
34	22	23	50	6	7	5	10	59	2	9	41	38	2	25	29	25
35	12	8	38	43	6	24	26	51	0	19	29	43	3	3	32	12
1736	1	17	27	19	6	13	42	43	10	29	17	48	3	11	34	59
37	19	14	59	58	7	2	4	55	10	4	54	54	4	20	18	1
38	8	23	48	35	6	21	20	47	8	14	42	59	4	28	20	48
39	27	21	21	15	7	9	42	59	7	20	20	5	6	7	3	49
40	17	6	9	52	6	28	58	51	6	0	8	10	6	15	6	36
1741	5	14	58	28	6	18	14	44	4	9	56	16	6	23	9	24
42	24	12	31	8	7	6	36	56	3	15	33	21	8	1	52	25
43	13	21	19	45	6	25	52	48	1	25	21	26	8	9	55	12
44	3	6	8	22	6	15	8	40	0	5	9	31	8	17	58	0
45	21	3	41	00	7	3	30	52	11	10	46	37	9	26	41	1
1746	10	12	29	37	6	22	46	44	9	20	34	42	10	4	43	48
47	29	10	2	17	7	11	8	56	8	26	11	48	11	13	26	49
48	18	18	50	54	7	0	24	48	7	5	59	53	11	21	29	36
49	7	3	39	30	6	19	40	40	5	15	47	58	11	29	32	23
50	26	1	12	10	7	8	2	52	4	21	25	4	1	8	15	24
1751	15	10	0	47	6	27	18	44	3	1	13	9	1	16	18	11
52	4	18	49	24	6	16	34	36	1	11	1	14	1	24	20	58
53	22	16	22	2	7	4	56	48	0	16	38	20	3	3	4	0
54	12	1	10	38	6	24	12	40	10	26	26	25	3	11	6	47
55	1	9	59	15	6	13	28	32	9	16	14	30	3	19	9	34
1756	20	7	31	55	7	1	50	44	8	11	51	36	4	27	52	35
57	8	16	20	32	6	21	6	37	6	21	39	42	5	5	55	23
58	27	13	53	12	7	9	28	49	5	27	16	48	6	14	38	24
59	16	22	41	48	6	28	44	41	4	7	4	53	6	22	41	11
60	6	7	30	25	6	18	0	33	2	16	52	58	7	0	43	58
1761	24	5	3	4	7	6	22	45	1	22	30	4	8	9	26	59
62	13	13	51	41	6	25	38	37	0	2	18	8	8	17	29	46
63	2	22	40	17	6	14	54	29	10	12	6	13	8	25	32	33
64	21	20	12	57	7	3	16	41	9	17	43	19	10	4	15	34
1765	10	5	1	33	6	22	32	34	7	27	31	25	10	12	18	22

EPOCHÆ MEDIARUM CONJUNCTIONUM LUNÆ CUM SOLE.

Annis Julianis incuntibus.

<i>Annis Julia- nis in- eunti- bus.</i>	<i>Temp. primæ Conj Med. in Mens. Jan.</i>				<i>Anomalix Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
	D.	H.	'	"	S	°	'	"	S	°	'	"	S	°	'	"
1766	29	2	34	14	7	10	54	46	7	3	8	31	11	21	1	24
67	18	11	22	50	7	0	10	38	5	12	56	36	11	29	4	11
68	7	20	11	27	6	19	26	30	3	22	44	41	0	7	6	58
69	25	17	44	6	7	7	48	41	2	28	21	47	1	15	49	59
70	15	2	32	42	6	27	4	33	1	8	9	52	1	23	52	46
1771	4	11	21	19	6	16	20	25	11	17	57	57	2	1	55	33
72	23	8	53	59	7	4	42	37	10	23	35	3	3	10	38	34
73	11	17	42	35	6	23	58	30	9	3	23	8	3	18	41	22
74	1	2	31	12	6	13	14	23	7	13	11	13	3	26	44	10
75	20	0	3	52	7	1	36	35	6	18	48	19	5	5	27	11
1776	9	8	52	28	6	20	52	27	4	28	36	24	5	13	29	58
77	27	6	25	8	7	9	14	38	4	4	13	30	6	22	12	59
78	16	15	13	44	6	28	30	30	2	14	1	35	7	0	15	46
79	6	10	2	21	6	17	46	22	0	23	49	40	7	8	18	33
80	24	21	35	0	7	6	8	34	11	29	26	46	8	17	1	34
1781	13	6	23	37	6	25	24	27	10	9	14	51	8	25	4	21
82	2	15	12	14	6	14	40	18	8	19	2	55	9	3	7	8
83	21	12	44	54	7	3	2	30	7	24	40	1	10	11	50	9
84	10	21	33	31	6	22	18	22	6	4	28	6	10	19	52	56
85	28	19	6	10	7	10	40	35	5	10	5	12	11	28	35	58
1786	18	3	54	47	6	29	56	27	3	19	53	17	0	6	38	45
87	7	12	43	23	6	19	12	19	1	29	41	23	0	14	41	32
88	26	10	16	3	7	7	34	31	1	5	18	28	1	23	24	34
89	14	19	4	39	6	26	50	23	11	15	6	34	2	1	27	21
90	4	3	53	16	6	16	6	15	9	24	54	39	2	9	30	8
1791	23	1	25	56	7	4	28	27	9	0	31	44	3	18	13	10
92	12	10	14	33	6	23	44	19	7	10	19	50	3	26	15	57
93	0	19	3	9	6	13	0	12	5	20	7	55	4	4	18	45
94	19	16	35	49	7	1	22	24	4	25	45	0	5	13	1	46
95	9	1	24	25	6	20	38	16	3	5	33	6	5	21	4	33
1796	27	22	57	5	7	9	0	28	2	11	10	11	6	29	47	34
97	16	7	45	41	6	28	16	19	0	20	58	17	7	7	50	21
98	5	16	34	18	6	17	32	11	11	0	46	22	7	15	53	8
99	24	14	6	57	7	5	54	23	10	6	23	28	8	24	36	10
1800	13	22	55	34	6	25	10	15	8	16	11	33	9	2	38	57

REVOLUTIONES LUNÆ AD SOLEM IN MENSIBUS ANNI COMMUNIS.

Dies Coll.						<i>Anomalia Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
		D.	H.	M.	S	S	°	'	"	S	°	'	"	S	°	'	"
29	Januarii	29	12	44	3	0	29	6	19	0	25	49	0	1	0	40	14
59	Februarii	28	1	28	6	1	28	12	39	1	21	38	1	2	1	20	28
88	Martii	29	14	12	9	2	27	18	58	2	17	27	1	3	2	0	42
118	Aprilis	28	2	56	12	3	26	25	17	3	13	16	2	4	2	40	56
147	Maii	27	15	40	15	4	25	31	37	4	9	5	2	5	3	21	10
177	Junii	26	4	24	18	5	24	37	56	5	4	54	3	6	4	1	24
206	Julii	25	17	8	21	6	23	44	15	6	0	43	3	7	4	41	38
236	Augusti	24	5	52	24	7	22	50	35	6	26	32	3	8	5	21	51
265	Septembris	22	18	36	27	8	21	56	54	7	22	21	4	9	6	2	5
295	Octobris	22	7	20	30	9	21	3	14	8	18	10	4	10	6	42	19
324	Novembris	20	20	4	34	10	20	9	33	9	13	59	5	11	7	22	33
354	Decembris	20	8	48	37	11	19	15	52	10	9	48	5	0	8	2	47
	$\frac{1}{2}$ Mens. Synod.	14	18	22	2	0	14	33	10	0	12	54	30	0	15	20	7

In Anno Biffextili post Februarium deme diem de dierum numero in Tabellâ, motus verò medii non mutantur.

MOTUS MEDII LUNÆ A SOLE AD HORAS, &c.

S. M. H.	Mot. M. D à ☉			S. M. H.	Mot. M. D à ☉		
	II	III			I	II	III
	°	'	"		°	'	"
1	0	30	29	31	0	15	45
2	1	0	57	32	0	16	15
3	1	31	26	33	0	16	46
4	2	1	54	34	0	17	16
5	2	32	23	35	0	17	47
6	3	2	52	36	0	18	17
7	3	33	20	37	0	18	48
8	4	3	49	38	0	19	18
9	4	34	17	39	0	19	49
10	5	4	46	40	0	20	19
11	5	35	15	41	0	20	50
12	6	5	43	42	0	21	20
13	6	36	12	43	0	21	50
14	7	6	41	44	0	22	21
15	7	37	9	45	0	22	51
16	8	7	38	46	0	23	22
17	8	38	6	47	0	23	52
18	9	8	35	48	0	24	23
19	9	39	4	49	0	24	53
20	10	9	32	50	0	25	24
21	10	40	1	51	0	25	54
22	11	10	29	52	0	26	25
23	11	40	58	53	0	26	55
24	12	11	27	54	0	27	26
25	12	41	55	55	0	27	56
26	13	12	24	56	0	28	27
27	13	42	53	57	0	28	57
28	14	13	21	58	0	29	28
29	14	43	50	59	0	29	58
30	15	14	18	60	0	30	29

REVOLUTIONES LUNÆ AD SOLEM IN ANNORUM CENTURIIS.

Menses Syn- dici.	Anni Julii- ani.	Temp primæ Conj. post Cent. completam.				Anomalia Media Solis.				Solis ab Apog. Lunæ Distantia.				Solis à Nodo Lunæ Distantia.			
		D.	H.	M.	S.	S.	°	'	"	S.	°	'	"	S.	°	'	"
1237	100	4	8	10	52	0	3	21	7	8	15	21	59	4	19	27	17
2474	200	8	16	21	45	0	6	42	15	5	0	43	58	9	8	54	35
3711	300	13	0	32	37	0	10	3	22	1	16	5	57	1	28	21	52
4948	400	17	8	43	29	0	13	24	30	10	1	27	56	6	17	49	10
6185	500	21	16	54	22	0	16	45	37	6	16	49	54	11	7	16	27
7422	600	26	1	5	14	0	20	6	45	3	2	11	53	3	26	43	45
8658	700	0	20	32	3	11	24	21	33	10	21	44	52	7	15	30	48
9895	800	5	4	42	56	11	27	42	41	7	7	6	51	0	4	58	6
11132	900	9	12	53	48	0	1	3	48	3	22	28	50	4	24	25	23
12369	1000	13	21	4	40	0	4	24	56	0	7	50	49	9	13	52	40
13606	1100	18	5	15	33	0	7	46	3	8	23	12	48	2	3	19	58
14843	1200	22	13	26	25	0	11	7	11	5	8	34	47	6	22	47	15
16080	1300	26	21	37	17	0	14	28	18	1	23	56	46	11	12	14	33
17316	1400	1	17	4	6	11	18	43	6	9	13	29	44	3	1	1	36
18553	1500	6	1	14	59	11	22	4	14	5	28	51	43	7	20	28	54
19790	1600	10	9	25	51	11	25	25	21	2	14	13	42	0	9	56	11
21027	1700	14	17	36	44	11	28	46	29	10	29	35	41	4	29	23	28
22264	1800	19	1	47	36	0	2	7	36	7	14	57	40	9	18	50	46
23501	1900	23	9	58	28	0	5	28	44	4	0	19	39	2	8	18	3
24738	2000	27	18	9	21	0	8	49	51	0	15	41	38	6	27	45	21
25974	2100	2	13	36	10	11	13	4	39	8	5	14	35	10	16	32	24
27211	2200	6	21	47	2	11	16	25	46	4	20	36	34	3	5	59	41
28448	2300	11	5	57	54	11	19	46	54	1	5	58	33	7	25	26	59
29685	2400	15	14	8	47	11	23	8	1	9	21	20	32	0	14	54	16
30922	2500	19	22	19	39	11	26	29	9	6	6	42	31	5	4	21	34
32159	2600	24	6	30	31	11	29	50	16	2	22	4	29	9	23	48	51
33396	2700	28	14	41	24	0	3	11	24	11	7	26	28	2	13	16	9
34632	2800	3	10	8	13	11	7	26	12	6	26	59	27	6	2	3	12
35869	2900	7	18	19	5	11	10	47	19	3	12	21	26	10	21	30	29
37106	3000	12	2	29	57	11	14	8	27	11	27	43	25	3	10	57	47
38343	3100	16	10	40	50	11	17	29	34	8	13	5	24	8	0	25	4
39580	3200	20	18	51	42	11	20	50	42	4	28	27	23	0	19	52	22
40817	3300	25	3	2	35	11	24	11	50	1	13	49	23	5	9	19	39

PERIODI LUNARES.

<i>Menses Synodici.</i>	<i>Periodi in Annis Jul. diebus & diei partibus.</i>					<i>Anomalia Media Solis.</i>				<i>Solis ab Apog. Lunæ Distantia.</i>				<i>Solis à Nodo Lunæ Distantia.</i>			
	Ann.	D.	H.	M.	S.	S	°	'	"	S	°	'	"	S	°	'	"
111	8	355	21	29	38	11	20	41	49	11	15	39	48	5	14	25	47
223	18	11	7	43	20	0	10	29	57	11	27	8	37	11	29	31	48
235	19	0	16	31	56	11	29	45	49	10	6	56	42	0	7	34	35
251	20	107	4	16	45	3	15	26	59	0	0	0	49	4	18	18	18
270	21	303	6	13	43	9	28	17	7	4	10	31	58	0	1	2	42
364	29	157	3	14	30	5	4	21	27	1	7	18	39	0	4	4	32
446	36	21	15	26	40	0	20	59	54	11	24	17	14	11	29	3	35
534	43	64	8	3	8	2	2	16	18	3	15	9	53	5	28	4	2
587	47	168	10	57	50	5	14	51	24	1	4	27	15	0	3	36	19
669	54	32	23	10	0	1	1	29	51	11	21	25	51	11	28	35	23
767	62	4	23	6	59	0	3	49	29	0	1	28	34	4	4	18	8
810	65	178	18	41	10	5	25	21	21	1	1	35	53	0	3	8	7
892	72	43	6	53	20	1	11	59	48	11	18	34	28	11	28	7	10
980	79	85	23	29	49	2	23	16	12	3	10	27	8	5	27	7	36
1115	90	54	14	36	40	1	22	29	45	11	15	43	5	11	27	38	58
1203	97	96	7	13	9	3	3	46	10	3	7	35	43	5	26	39	24
1338	108	65	22	20	0	2	2	59	42	11	12	51	42	11	27	10	45
2148	173	243	17	1	10	7	28	21	4	0	14	27	36	0	0	18	52
2301	186	13	21	20	57	0	11	28	26	0	4	25	43	0	12	54	25
2371	191	255	0	44	31	8	8	51	1	0	11	36	13	11	29	50	39
2641	213	192	6	58	14	6	7	18	8	4	22	8	10	0	0	53	22
2817	227	276	16	11	11	8	29	50	55	0	5	53	28	11	28	54	14
3040	245	286	23	54	31	9	10	20	52	0	3	2	5	11	28	26	2
3621	292	277	6	28	3	9	0	34	20	8	2	35	17	5	28	0	58
3709	299	319	23	4	31	10	11	50	44	11	24	27	56	11	27	1	24
4267	344	361	0	44	53	11	22	38	46	0	0	13	59	6	11	11	0
4601	371	363	5	57	51	11	23	50	32	11	13	2	24	11	25	8	34
5059	409	8	6	13	8	0	4	6	19	9	17	7	44	0	2	14	56
5458	441	102	23	9	25	3	7	9	3	4	28	1	38	11	29	47	37
6444	521	0	3	3	31	11	25	3	12	1	13	22	46	0	0	56	36
6890	557	21	18	30	12	0	16	3	6	1	7	40	2	0	0	0	11
15928	1287	287	6	1	34	9	0	27	16	2	29	47	40	0	0	19	14
22325	1804	359	10	34	42	11	7	33	17	11	29	47	6	11	29	44	56

EPOCHÆ MEDIORUM MOTUUM LUNÆ
Et Apogei ejus. Existente Terrâ in Aphelio.

Annis Chri- sticur- rent.	Luna ab Æqui- noctio.				Apog. Luna ab Æquinoctio.				Annis Chri- sticur- rent.	Luna ab Æqui- noctio.				Apog. Luna ab Æquinoctio.			
	S.	O.	I	II	S.	O.	I	II		S.	O.	I	II	S.	O.	I	II
1661	3	24	52	14	5	19	29	0	1696	2	22	56	56	5	3	44	7
62	8	7	40	22	7	0	10	34	97	7	5	45	4	6	14	25	42
63	0	20	28	30	8	10	52	9	98	11	18	33	12	7	25	7	16
64	5	3	16	38	9	21	33	43	99	4	1	21	20	9	5	48	51
1665	9	16	4	46	11	2	15	18	1700	8	14	9	28	10	16	30	25
1666	1	28	52	54	0	12	56	52	1701	0	26	57	36	11	27	12	0
67	6	11	41	2	1	23	38	27	2	5	9	45	44	1	7	53	34
68	10	24	29	10	3	4	20	1	3	9	22	33	52	2	18	35	9
69	3	7	17	18	4	15	1	36	4	2	5	22	0	3	29	16	43
1670	7	20	5	26	5	25	43	10	1705	6	18	10	8	5	9	58	18
1671	0	2	53	34	7	6	24	45	1706	11	0	58	16	6	20	39	52
72	4	15	41	43	8	17	6	19	7	3	13	46	24	8	1	21	27
73	8	28	29	51	9	27	47	54	8	7	26	34	32	9	12	3	1
74	1	11	17	59	11	8	29	28	9	0	9	22	40	10	22	44	36
1675	5	24	6	7	0	19	11	3	1710	4	22	10	48	0	3	26	10
1676	10	6	54	15	1	29	52	37	1711	9	4	58	56	1	14	7	45
77	2	19	42	23	3	10	34	12	12	1	17	47	5	2	24	49	19
78	7	2	30	31	4	21	15	46	13	6	0	35	13	4	5	30	54
79	11	15	18	39	6	1	57	21	14	10	13	23	21	5	16	12	28
1680	3	28	6	47	7	12	38	55	1715	2	26	11	29	6	26	54	3
1681	8	10	54	55	8	23	20	30	1716	7	8	59	37	8	7	35	37
82	0	23	43	3	10	4	2	4	17	11	21	47	45	9	18	17	12
83	5	6	31	11	11	14	43	39	18	4	4	35	53	10	28	58	46
84	9	19	19	19	0	25	25	13	19	8	17	24	1	0	9	40	21
1685	2	2	7	27	2	6	6	48	1720	1	0	12	9	1	20	21	55
1686	6	14	55	35	3	16	48	22	1721	5	13	0	17	3	1	3	30
87	10	27	43	43	4	27	29	57	22	9	25	48	25	4	11	45	4
88	3	10	31	51	6	8	11	31	23	2	8	36	33	5	22	26	39
89	7	23	19	59	7	18	53	6	24	6	21	24	41	7	3	8	13
1690	0	6	8	7	8	29	34	40	1725	11	4	12	49	8	13	49	48
1691	4	18	56	15	10	10	16	15	1726	3	17	0	57	9	24	31	22
92	9	1	44	24	11	20	57	49	27	7	29	49	5	11	5	12	57
93	1	14	32	32	1	1	39	24	28	0	12	37	13	0	15	54	31
94	5	27	20	40	2	12	20	58	29	4	25	25	21	1	26	36	6
1695	10	10	8	48	3	23	2	33	1730	9	8	13	29	3	7	17	40

*EPOCHÆ MEDIORUM MOTUUM LUNÆ
Et Apogei ejus. Existente Terrâ in Aphelio.*

<i>Annis Chri- sticur- rent.</i>	<i>Luna ab Æqui- noctio.</i>				<i>Apog. Luna ab Æquinoctio.</i>				<i>Annis Chri- sticur- rent.</i>	<i>Luna ab Æqui- noctio.</i>				<i>Apog. Luna ab Æquinoctio.</i>			
	<i>S.</i>	<i>O.</i>	<i>I</i>	<i>II</i>	<i>S.</i>	<i>O.</i>	<i>I</i>	<i>II</i>		<i>S.</i>	<i>O.</i>	<i>I</i>	<i>II</i>	<i>S.</i>	<i>O.</i>	<i>I</i>	<i>II</i>
1731	1	21	1	37	4	17	59	15	1766	0	19	6	19	4	2	14	22
32	6	3	49	46	5	28	40	49	67	5	1	54	27	5	12	55	57
33	10	16	37	54	7	9	22	24	68	9	14	42	35	6	23	37	31
34	2	29	26	2	8	20	3	58	69	1	27	30	43	8	4	19	6
1735	7	12	14	10	10	0	45	33	1770	6	10	18	51	9	15	0	40
1736	11	25	2	18	11	11	27	7	1771	10	23	6	59	10	25	42	15
37	4	7	50	26	0	22	8	42	72	3	5	55	8	0	6	23	49
38	8	20	38	34	2	2	50	16	73	7	18	43	16	1	17	5	24
39	1	3	26	42	3	13	31	51	74	0	1	31	24	2	27	46	58
1740	5	16	14	50	4	24	13	25	1775	4	14	19	32	4	8	28	33
1741	9	29	2	58	6	4	55	0	1776	8	27	7	40	5	19	10	7
42	2	11	51	6	7	15	36	34	77	1	9	55	48	6	29	51	42
43	6	24	39	14	8	26	18	9	78	5	22	43	56	8	10	33	16
44	11	7	27	22	10	6	59	43	79	10	5	32	4	9	21	14	51
1745	3	20	15	30	11	17	41	18	1780	2	18	20	12	11	1	56	25
1746	8	3	3	38	0	28	22	52	1781	7	1	8	20	0	12	38	0
47	0	15	51	46	2	9	4	27	82	11	13	56	28	1	23	19	34
48	4	28	39	54	3	19	46	1	83	3	26	44	36	3	4	1	9
49	9	11	28	2	5	0	27	36	84	8	9	32	44	4	14	42	43
1750	1	24	16	10	6	11	9	10	1785	0	22	20	52	5	25	24	18
1751	6	7	4	18	7	21	50	45	1786	5	5	9	0	7	6	5	52
52	10	19	52	27	9	2	32	19	87	9	17	57	8	8	16	47	27
53	3	2	40	35	10	13	13	54	88	2	0	45	16	9	27	29	1
54	7	15	28	43	11	23	55	28	89	6	13	33	24	11	8	10	36
1755	11	28	16	51	1	4	37	3	1790	10	26	21	32	0	18	52	10
1756	4	11	4	59	2	15	18	37	1791	3	9	9	40	1	29	33	45
57	8	23	53	7	3	26	0	12	92	7	21	57	49	3	10	15	19
58	1	6	41	15	5	6	41	46	93	0	4	45	57	4	20	56	54
59	5	19	29	23	6	17	23	21	94	4	17	34	5	6	1	38	28
1760	10	2	17	31	7	28	4	55	1795	9	0	22	13	7	12	20	3
1761	2	15	5	39	9	8	46	30	1796	1	13	10	21	8	23	1	37
62	6	27	53	47	10	19	28	4	97	5	25	58	29	10	3	43	12
63	11	10	41	55	0	0	9	39	98	10	8	46	37	11	14	24	46
64	3	23	30	3	1	10	51	13	99	2	21	34	45	0	25	6	21
1765	8	6	18	11	2	21	32	48	1800	7	4	22	53	2	5	47	55

EPOCHÆ MOTUS NODI ASCENDENTIS LUNÆ
Existente Terrâ in Aphelio.

<i>Annis Chri- sticur- rent.</i>	<i>Nodus) Ascend. ab Æquinoct.</i>	<i>Annis Chri- sticur- rent.</i>	<i>Nodus) Ascend. ab Æquinoct.</i>	<i>Annis Chri- sticur- rent.</i>	<i>Nodus) Ascend. ab Æquinoct.</i>	<i>Annis Chri- sticur- rent.</i>	<i>Nodus) Ascend. ab Æquinoct.</i>
<i>s. o. i //</i>		<i>s. o. i //</i>		<i>s. o. i //</i>		<i>s. o. i //</i>	
1661	6 12 6 50	1696	7 25 7 52	1731	9 8 8 55	1766	10 21 9 57
62	5 22 46 17	97	7 5 47 20	32	8 18 48 22	67	10 1 49 25
63	5 3 25 45	98	6 16 26 47	33	7 29 27 50	68	9 12 28 52
64	4 14 5 12	99	5 27 6 15	34	7 10 7 17	69	8 23 8 20
1665	3 24 44 40	1700	5 7 45 42	1735	6 20 46 45	1770	8 3 47 47
1666	3 5 24 7	1701	4 18 25 10	1736	6 1 26 12	1771	7 14 27 15
67	2 16 3 35	2	3 29 4 37	37	5 12 5 40	72	6 25 6 42
68	1 26 43 2	3	3 9 44 5	38	4 22 45 7	73	6 5 46 10
69	1 7 22 30	4	2 20 23 32	39	4 3 24 35	74	5 16 25 37
1670	0 18 1 57	1705	2 1 3 0	1740	3 14 4 2	1775	4 27 5 5
1671	11 28 41 25	1706	1 11 42 27	1741	2 24 43 30	1776	4 7 44 32
72	11 9 20 52	7	0 22 21 55	42	2 5 22 57	77	3 18 24 0
73	10 20 0 20	8	0 3 1 22	43	1 16 2 25	78	2 29 3 27
74	10 0 39 47	9	11 13 40 50	44	0 26 41 52	79	2 9 42 55
1675	9 11 19 15	1710	10 24 20 17	1745	0 7 21 20	1780	1 20 22 22
1676	8 21 58 42	1711	10 4 59 45	1746	11 18 0 47	1781	1 1 1 50
77	8 2 38 10	12	9 15 39 12	47	10 28 40 15	82	0 11 41 17
78	7 13 17 37	13	8 26 18 40	48	10 9 19 42	83	11 22 20 45
79	6 23 57 5	14	8 6 58 7	49	9 19 59 10	84	11 3 0 12
1680	6 4 36 32	1715	7 17 37 35	1750	9 0 38 37	1785	10 13 39 40
1681	5 15 16 0	1716	6 28 17 2	1751	8 11 18 5	1786	9 24 19 7
82	4 25 55 27	17	6 8 56 30	52	7 21 57 32	87	9 4 58 35
83	4 6 34 55	18	5 19 35 57	53	7 2 37 0	88	8 15 38 2
84	3 17 14 22	19	5 0 15 25	54	6 13 16 27	89	7 26 17 30
1685	2 27 53 50	1720	4 10 54 52	1755	5 23 55 55	1790	7 6 56 57
1686	2 8 33 17	1721	3 21 34 20	1756	5 4 35 22	1791	6 17 36 25
87	1 19 12 45	22	3 2 13 47	57	4 15 14 50	92	5 28 15 52
88	0 29 52 12	23	2 12 53 15	58	3 25 54 17	93	5 8 55 20
89	0 10 31 40	24	1 23 32 42	59	3 6 33 45	94	4 19 34 47
1690	11 21 11 7	1725	1 4 12 10	1760	2 17 13 12	1795	4 0 14 15
1691	11 1 50 35	1726	0 14 51 37	1761	1 27 52 40	1796	3 10 53 42
92	10 12 30 2	27	11 25 31 5	62	1 8 32 7	97	2 21 33 10
93	9 23 9 30	28	11 6 10 32	63	0 19 11 35	98	2 2 12 37
94	9 3 48 57	29	10 16 50 0	64	11 29 51 2	99	1 12 52 5
1695	8 14 28 25	1730	9 27 29 27	1765	11 10 30 30	1800	0 23 31 32

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Sig. o.											Sig. I.										
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.			Mot. Nod. Retrog.			Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.			Mot. Nod. Retrog.		
	S.	O.	I	II	O.	I	II	O.	I	II		S.	O.	I	II	O.	I	II	O.	I	II
1	0	13	22	20	0	6	27	0	3	4	1	24	32	7	3	20	8	1	35	8	
2	0	26	44	40	0	12	53	0	6	8	2	7	54	26	3	26	38	1	38	13	
3	1	10	7	0	0	19	20	0	9	11	2	21	16	44	3	33	7	1	41	18	
4	1	23	29	20	0	25	46	0	12	15	3	4	39	2	3	39	37	1	44	23	
5	2	6	51	40	0	32	12	0	15	19	3	18	1	20	3	46	6	1	47	29	
6	2	20	14	0	0	38	38	0	18	22	4	1	23	38	3	52	36	1	50	34	
7	3	3	36	20	0	45	5	0	21	26	4	14	45	56	3	59	7	1	53	40	
8	3	16	58	40	0	51	32	0	24	29	4	28	8	14	4	5	37	1	56	45	
9	4	0	21	0	0	57	58	0	27	33	5	11	30	32	4	12	8	1	59	50	
10	4	13	43	19	1	4	25	0	30	37	5	24	52	49	4	18	38	2	2	56	
11	4	27	5	39	1	10	52	0	33	41	6	8	15	6	4	25	9	2	6	2	
12	5	10	27	59	1	17	19	0	36	45	6	21	37	23	4	31	41	2	9	9	
13	5	23	50	19	1	23	46	0	39	49	7	4	59	40	4	38	12	2	12	15	
14	6	7	12	38	1	30	13	0	42	53	7	18	21	57	4	44	44	2	15	21	
15	6	20	34	58	1	36	40	0	45	57	8	1	44	14	4	51	16	2	18	27	
16	7	3	57	18	1	43	7	0	49	1	8	15	6	31	4	57	49	2	21	33	
17	7	17	19	38	1	49	34	0	52	5	8	28	28	48	5	4	21	2	24	40	
18	8	0	41	58	1	56	2	0	55	9	9	11	51	4	5	10	53	2	27	47	
19	8	14	4	18	2	2	29	0	58	13	9	25	13	20	5	17	26	2	30	54	
20	8	27	26	37	2	8	56	1	1	17	10	8	35	36	5	24	0	2	34	0	
21	9	10	48	57	2	15	23	1	4	22	10	21	57	52	5	30	33	2	37	7	
22	9	24	11	16	2	21	51	1	7	26	11	5	20	8	5	37	7	2	40	15	
23	10	7	33	35	2	28	19	1	10	31	11	18	42	24	5	43	41	2	43	22	
24	10	20	55	54	2	34	47	1	13	35	0	2	4	40	5	50	16	2	46	30	
25	11	4	18	13	2	41	15	1	16	39	0	15	26	55	5	56	50	2	49	37	
26	11	17	40	32	2	47	44	1	19	44	0	28	49	10	6	3	25	2	52	45	
27	0	1	2	52	2	54	13	1	22	48	1	12	11	24	6	10	0	2	55	53	
28	0	14	25	11	3	0	41	1	25	53	1	25	33	39	6	16	36	2	59	0	
29	0	27	47	30	3	7	10	1	28	58	2	8	55	54	6	23	12	3	2	8	
30	1	11	9	48	3	13	39	1	32	3	2	22	18	8	6	29	48	3	5	16	

**MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.**

Anomalia Media Solis.

Sig. II.												Sig. III.												
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.			
	S.	O.	I	II	O.	I	II	O.	I	II	S.	O.	I	II	O.	I	II	O.	I	II				
0																								
1	3	5	40	23	6	36	24	3	8	25	4	16	45	59	9	57	10	4	43	51				
2	3	19	2	37	6	43	0	3	11	33	5	0	8	7	10	3	57	4	47	5				
3	4	2	24	51	6	49	37	3	14	42	5	13	30	14	10	10	45	4	50	18				
4	4	15	47	4	6	56	15	3	17	51	5	26	52	22	10	17	33	4	53	32				
5	4	29	9	18	7	2	52	3	21	0	6	10	14	29	10	24	21	4	56	46				
6	5	12	31	31	7	9	30	3	24	10	6	23	36	37	10	31	9	5	0	0				
7	5	25	53	44	7	16	8	3	27	19	7	6	58	43	10	37	58	5	3	15				
8	6	9	15	57	7	22	47	3	30	29	7	20	20	50	10	44	48	5	6	29				
9	6	22	38	9	7	29	26	3	33	38	8	3	42	56	10	51	37	5	9	44				
10	7	6	0	22	7	36	6	3	36	48	8	17	5	3	10	58	27	5	12	59				
11	7	19	22	34	7	42	46	3	39	58	9	0	27	9	11	5	18	5	16	14				
12	8	2	44	46	7	49	26	3	43	8	9	13	49	14	11	12	9	5	19	29				
13	8	16	6	59	7	56	6	3	46	18	9	27	11	20	11	19	0	5	22	44				
14	8	29	29	12	8	2	47	3	49	28	10	10	33	25	11	25	51	5	26	0				
15	9	12	51	24	8	9	28	3	52	39	10	23	55	31	11	32	42	5	29	15				
16	9	26	13	35	8	16	9	3	55	50	11	7	17	35	11	39	34	5	32	31				
17	10	9	35	46	8	22	50	3	59	1	11	20	39	40	11	46	27	5	35	47				
18	10	22	57	56	8	29	32	4	2	12	0	4	1	45	11	53	20	5	39	4				
19	11	6	20	6	8	36	14	4	5	23	0	17	23	49	12	0	13	5	42	20				
20	11	19	42	17	8	42	57	4	8	35	1	0	45	53	12	7	7	5	45	37				
21	0	3	4	28	8	49	40	4	11	47	1	14	7	56	12	14	1	5	48	54				
22	0	16	26	38	8	56	24	4	14	59	1	27	30	0	12	20	55	5	52	11				
23	0	29	48	48	9	3	7	4	18	10	2	10	52	4	12	27	50	5	55	28				
24	1	13	10	57	9	9	51	4	21	22	2	24	14	7	12	34	45	5	58	45				
25	1	26	33	7	9	16	36	4	24	35	3	7	36	10	12	41	40	6	2	3				
26	2	9	55	16	9	23	21	4	27	47	3	20	58	14	12	48	36	6	5	20				
27	2	23	17	24	9	30	6	4	31	0	4	4	20	17	12	55	32	6	8	38				
28	3	6	39	33	9	36	52	4	34	12	4	17	42	19	13	2	28	6	11	56				
29	3	20	1	42	9	43	38	4	37	25	5	1	4	21	13	9	24	6	15	14				
30	4	3	23	51	9	50	24	4	40	38	5	14	26	24	13	16	21	6	18	32				

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Sig. IV.												Sig. V.												
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.			
	S.	O.	I	//	O.	I	//	O.	I	//	S.	O.	I	//	O.	I	//	O.	I	//				
0																								
1	5	27	48	26	13	23	18	6	21	50	7	8	48	0	16	54	14	8	2	6				
2	6	11	10	27	13	30	16	6	25	9	7	22	9	57	17	1	20	8	5	28				
3	6	24	32	28	13	37	14	6	28	27	8	5	31	54	17	8	25	8	8	51				
4	7	7	54	29	13	44	13	6	31	46	8	18	53	51	17	15	31	8	12	13				
5	7	21	16	30	13	51	12	6	35	5	9	2	15	48	17	22	37	8	15	35				
6	8	4	38	31	13	58	10	6	38	24	9	15	37	45	17	29	44	8	18	58				
7	8	18	0	32	14	5	9	6	41	43	9	28	59	41	17	36	50	8	22	20				
8	9	1	22	33	14	12	8	6	45	3	10	12	21	37	17	43	57	8	25	43				
9	9	14	44	34	14	19	9	6	48	23	10	25	43	33	17	51	4	8	29	5				
10	9	28	6	34	14	26	9	6	51	42	11	9	5	29	17	58	11	8	32	28				
11	10	11	28	33	14	33	10	6	55	2	11	22	27	25	18	5	17	8	35	52				
12	10	24	50	33	14	40	11	6	58	23	0	5	49	21	18	12	24	8	39	15				
13	11	8	12	33	14	47	11	7	1	42	0	19	11	17	18	19	31	8	42	38				
14	11	21	34	32	14	54	12	7	5	3	1	2	33	14	18	26	38	8	46	1				
15	0	4	56	31	15	1	14	7	8	23	1	15	55	10	18	33	46	8	49	25				
16	0	18	18	31	15	8	16	7	11	43	1	29	17	6	18	40	54	8	52	48				
17	1	1	40	30	15	15	18	7	15	4	2	12	39	2	18	48	2	8	56	12				
18	1	15	2	29	15	22	21	7	18	25	2	26	0	58	18	55	10	8	59	35				
19	1	28	24	27	15	29	23	7	21	46	3	9	22	54	19	2	17	9	2	58				
20	2	11	46	26	15	36	26	7	25	7	3	22	44	50	19	9	25	9	6	22				
21	2	25	8	25	15	43	29	7	28	29	4	6	6	46	19	16	33	9	9	45				
22	3	8	30	23	15	50	33	7	31	50	4	19	28	41	19	23	41	9	13	9				
23	3	21	52	21	15	57	36	7	35	10	5	2	50	36	19	30	49	9	16	32				
24	4	5	14	18	16	4	40	7	38	32	5	16	12	31	19	37	57	9	19	56				
25	4	18	36	16	16	11	44	7	41	53	5	29	34	26	19	45	6	9	23	19				
26	5	1	58	14	16	18	49	7	45	15	6	12	56	21	19	52	14	9	26	42				
27	5	15	20	12	16	25	53	7	48	37	6	26	18	17	19	59	22	9	30	6				
28	5	28	42	5	16	32	58	7	51	59	7	9	40	13	20	6	30	9	33	29				
29	6	12	4	6	16	40	3	7	55	21	7	23	2	8	20	13	38	9	36	53				
30	6	25	26	3	16	47	8	7	58	43	8	6	24	4	20	20	47	9	40	16				

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Sig. VI.												Sig. VII.											
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.			Mot. Nod. Retrog.				Motus Medius Lunæ.				Mot. Apog. Lunæ.			Mot. Nod. Retrog.				
	o	s.	o.	/	//	o.	/	//	o.	/	//	s.	o.	/	//	o.	/	//	o.	/	//		
1	8	19	46	0		20	27	55	9	43	40	10	0	44	2	24	1	31	11	25	12		
2	9	3	7	55		20	35	4	9	47	3	10	14	5	59	24	8	36	11	28	34		
3	9	16	29	51		20	42	12	9	50	26	10	27	27	56	24	15	41	11	31	55		
4	9	29	51	47		20	49	20	9	53	50	11	10	49	54	24	22	46	11	35	16		
5	10	13	13	42		20	56	28	9	57	13	11	24	11	52	24	29	51	11	38	39		
6	10	26	35	37		21	3	37	10	0	37	0	7	33	50	24	36	55	11	42	0		
7	11	9	57	32		21	10	46	10	4	0	0	20	55	47	24	43	58	11	45	22		
8	11	23	19	28		21	17	54	10	7	24	1	4	17	45	24	51	1	11	48	42		
9	0	6	41	24		21	25	1	10	10	47	1	17	39	43	24	58	5	11	52	4		
10	0	20	3	19		21	32	9	10	14	10	2	1	1	42	25	5	8	11	55	25		
11	1	3	25	14		21	39	17	10	17	34	2	14	23	41	25	12	11	11	58	46		
12	1	16	47	10		21	46	24	10	20	57	2	27	45	40	25	19	13	12	2	7		
13	2	0	9	6		21	53	32	10	24	21	3	11	7	39	25	26	16	12	5	28		
14	2	13	31	2		22	0	40	10	27	44	3	24	29	38	25	33	18	12	8	49		
15	2	26	52	57		22	7	48	10	31	7	4	7	51	37	25	40	20	12	12	9		
16	3	10	14	53		22	14	56	10	34	31	4	21	13	36	25	47	22	12	15	30		
17	3	23	36	49		22	22	3	10	37	54	5	4	35	35	25	54	23	12	18	50		
18	4	6	58	45		22	29	10	10	41	17	5	17	57	35	26	1	24	12	22	9		
19	4	20	20	42		22	36	17	10	44	40	6	1	19	35	26	8	25	12	25	30		
20	5	3	42	38		22	43	24	10	48	4	6	14	41	34	26	15	26	12	28	50		
21	5	17	4	34		22	50	31	10	51	27	6	28	3	34	26	22	26	12	32	10		
22	6	0	26	30		22	57	38	10	54	49	7	11	25	35	26	29	25	12	35	29		
23	6	13	48	26		23	4	44	10	58	12	7	24	47	36	26	36	25	12	38	49		
24	6	27	10	23		23	11	50	11	1	34	8	8	9	37	26	43	24	12	42	9		
25	7	10	32	19		23	18	57	11	4	57	8	21	31	38	26	50	24	12	45	28		
26	7	23	54	16		23	26	3	11	8	19	9	4	53	39	26	57	21	12	48	46		
27	8	7	16	13		23	33	9	11	11	41	9	18	15	40	27	4	20	12	52	5		
28	8	20	38	10		23	40	15	11	15	4	10	1	37	41	27	11	18	12	55	14		
29	9	4	0	8		23	47	20	11	18	26	10	14	59	42	27	18	16	12	58	42		
30	9	17	22	5		23	54	26	11	21	49	10	28	21	44	27	25	13	13	2	0		

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Sig. VIII.												Sig. IX.												
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.			
	0	S.	O.	I	II	S.	O.	I	II	O.	I	II	S.	O.	I	II	S.	O.	I	II	O.	I	II	
1	II	II	43	47	0	27	32	10	13	5	18	0	22	46	26	I	0	57	57	14	43	7		
2	II	25	5	49	0	27	39	7	13	8	36	I	6	8	34	I	I	4	43	14	46	20		
3	0	8	27	51	0	27	46	3	13	11	54	I	19	30	43	I	I	11	28	14	49	33		
4	0	21	49	54	0	27	52	59	13	15	12	I	2	2	52	52	I	I	18	13	14	52	45	
5	I	5	11	57	0	27	59	54	13	18	30	2	16	15	I	I	I	24	58	14	55	57		
6	I	18	34	0	0	28	6	49	13	21	47	2	29	37	11	I	I	31	43	14	59	10		
7	2	I	56	3	0	28	13	44	13	25	4	3	12	59	20	I	I	38	27	15	2	22		
8	2	15	18	7	0	28	20	39	13	28	21	3	26	21	30	I	I	45	10	15	5	34		
9	2	28	40	11	0	28	27	33	13	31	38	4	9	43	40	I	I	51	54	15	8	46		
10	3	12	2	15	0	28	34	27	13	34	55	4	23	5	51	I	I	58	37	15	11	58		
11	3	25	24	19	0	28	41	21	13	38	12	5	6	28	I	I	2	5	20	15	15	9		
12	4	8	46	23	0	28	48	14	13	41	29	5	19	50	11	I	2	12	2	15	18	20		
13	4	22	8	28	0	28	55	7	13	44	45	6	3	12	22	I	2	18	44	15	21	31		
14	5	5	30	33	0	29	2	0	13	48	1	6	16	34	33	I	2	25	26	15	24	42		
15	5	18	52	38	0	29	8	52	13	51	17	6	29	56	44	I	2	32	7	15	27	53		
16	6	2	14	43	0	29	15	44	13	54	32	7	13	18	56	I	2	38	48	15	31	4		
17	6	15	36	48	0	29	22	35	13	57	48	7	26	41	8	I	2	45	28	15	34	14		
18	6	28	58	54	0	29	29	26	14	1	3	8	10	3	21	I	2	52	8	15	37	24		
19	7	12	20	59	0	29	36	16	14	4	19	8	23	25	33	I	2	58	48	15	40	34		
20	7	25	43	5	0	29	43	7	14	7	34	9	6	47	45	I	3	5	28	15	43	44		
21	8	9	5	12	0	29	49	57	14	10	49	9	20	9	58	I	3	12	8	15	46	54		
22	8	22	27	18	0	29	56	46	14	14	3	10	3	32	10	I	3	18	47	15	50	4		
23	9	5	49	25	I	0	3	36	14	17	17	10	16	54	23	I	3	25	26	15	53	13		
24	9	19	11	31	I	0	10	25	14	20	32	11	0	16	36	I	3	32	4	15	56	22		
25	10	2	33	38	I	0	17	13	14	23	46	11	13	38	49	I	3	38	42	15	59	32		
26	10	15	55	45	I	0	24	1	14	27	0	11	27	1	3	I	3	45	19	16	2	41		
27	10	29	17	53	I	0	30	49	14	30	14	0	10	23	16	I	3	51	57	16	5	50		
28	11	12	40	1	I	0	37	37	14	33	27	0	23	45	30	I	3	58	34	16	8	59		
29	11	26	2	9	I	0	44	24	14	36	41	I	7	7	45	I	4	5	11	16	12	8		
30	0	9	24	17	I	0	51	11	14	39	54	I	20	30	0	I	4	11	47	16	15	16		

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD GRADUS ANOMALIÆ MEDIÆ SOLIS.

Anomalia Media Solis.

Sig. X.												Sig. XI.												
Gr.	Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Mot. Apog. Lunæ.				Mot. Nod. Retrog.			
	S.	O.	I	//	S.	O.	I	//	O.	I	//	S.	O.	I	//	S.	O.	I	//	O.	I	//		
0																								
1	2	3	52	14	1	4	18	23	16	18	24	3	15	0	38	1	7	34	25	17	51	34		
2	2	17	14	29	1	4	24	58	16	21	32	3	28	22	57	1	7	40	53	17	54	39		
3	3	0	36	44	1	4	31	34	16	24	39	4	11	45	16	1	7	47	21	17	57	44		
4	3	13	58	58	1	4	38	9	16	27	47	4	25	7	35	1	7	53	50	18	0	48		
5	3	27	21	13	1	4	44	44	16	30	55	5	8	29	54	1	8	0	19	18	3	53		
6	4	10	43	28	1	4	51	18	16	34	3	5	21	52	13	1	8	6	47	18	6	57		
7	4	24	5	44	1	4	57	53	16	37	10	6	5	14	32	1	8	13	15	18	10	2		
8	5	7	28	0	1	5	4	27	16	40	17	6	18	36	51	1	8	19	43	18	13	6		
9	5	20	50	16	1	5	11	2	16	43	25	7	1	59	10	1	8	26	11	18	16	10		
10	6	4	12	32	1	5	17	35	16	46	32	7	15	21	30	1	8	32	39	18	19	15		
11	6	17	34	48	1	5	24	8	16	49	39	7	28	43	49	1	8	39	6	18	22	19		
12	7	0	57	4	1	5	30	41	16	52	45	8	12	6	9	1	8	45	33	18	25	24		
13	7	14	19	20	1	5	37	14	16	55	51	8	25	28	30	1	8	52	1	18	28	28		
14	7	27	41	37	1	5	43	46	16	58	59	9	8	50	50	1	8	58	28	18	31	32		
15	8	11	3	54	1	5	50	19	17	2	5	9	22	13	10	1	9	4	54	18	34	35		
16	8	24	26	11	1	5	56	51	17	5	12	10	5	35	30	1	9	11	21	18	37	39		
17	9	7	48	28	1	6	3	22	17	8	17	10	18	57	49	1	9	17	48	18	40	43		
18	9	21	10	45	1	6	9	53	17	11	23	11	2	20	9	1	9	24	15	18	43	47		
19	10	4	33	2	1	6	16	25	17	14	30	11	15	42	29	1	9	30	42	18	46	51		
20	10	17	55	19	1	6	22	56	17	17	35	11	29	4	49	1	9	37	9	18	49	55		
21	11	1	17	36	1	6	29	26	17	20	42	0	12	27	8	1	9	43	36	18	52	59		
22	11	14	39	54	1	6	35	57	17	23	47	0	25	49	28	1	9	50	2	18	56	3		
23	11	28	2	12	1	6	42	27	17	26	53	1	9	11	48	1	9	56	29	18	59	6		
24	0	11	24	30	1	6	48	58	17	29	58	1	22	34	8	1	10	2	56	19	2	10		
25	0	24	46	48	1	6	55	28	17	33	4	2	5	56	28	1	10	9	22	19	5	13		
26	1	8	9	6	1	7	1	58	17	36	9	2	19	18	48	1	10	15	49	19	8	18		
27	1	21	31	24	1	7	8	28	17	39	14	3	2	41	8	1	10	22	15	19	11	21		
28	2	4	53	42	1	7	14	57	17	42	20	3	16	3	28	1	10	28	42	19	14	25		
29	2	18	16	1	1	7	21	27	17	45	25	3	29	25	48	1	10	35	8	19	17	29		
30	3	1	38	20	1	7	27	56	17	48	30	4	12	48	8	1	10	41	34	19	20	32		

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD MINUTA ANOMALIÆ MEDIÆ SOLIS.

	Mot. Med. Lunæ.	Apogei Lunæ.	Motus Nod. ☾.		Anom. Solis.	Mot. Med. Lunæ.	Apogei Lunæ.	Motus Nod. ☽.
Tert. Sec. Min.	II III IIII I II III O. I II	II III IIII I II III O. I II	II III IIII I II III O. I II		Tert. Sec. Min.	II III IIII I II III O. I II	II III IIII I II III O. I II	II III IIII I II III O. I II
0	0 0 0	0 0 0	0 0 0		30	6 41 4	0 3 23	0 1 37
1	0 13 22	0 0 7	0 0 3		31	6 54 26	0 3 30	0 1 40
2	0 26 44	0 0 14	0 0 6		32	7 7 48	0 3 37	0 1 43
3	0 40 6	0 0 20	0 0 10		33	7 21 10	0 3 44	0 1 46
4	0 53 29	0 0 27	0 0 13		34	7 34 33	0 3 51	0 1 50
5	1 6 51	0 0 34	0 0 16		35	7 47 55	0 3 57	0 1 53
6	1 20 13	0 0 41	0 0 19		36	8 1 17	0 4 4	0 1 56
7	1 33 35	0 0 47	0 0 23		37	8 14 39	0 4 11	0 1 59
8	1 46 57	0 0 54	0 0 26		38	8 28 1	0 4 18	0 2 2
9	2 0 19	0 1 1	0 0 29		39	8 41 23	0 4 24	0 2 6
10	2 13 41	0 1 8	0 0 32		40	8 54 45	0 4 31	0 2 9
11	2 27 3	0 1 15	0 0 35		41	9 8 7	0 4 38	0 2 12
12	2 40 26	0 1 21	0 0 39		42	9 21 30	0 4 45	0 2 15
13	2 53 48	0 1 28	0 0 42		43	9 34 52	0 4 52	0 2 19
14	3 7 10	0 1 35	0 0 45		44	9 48 14	0 4 58	0 2 22
15	3 20 32	0 1 42	0 0 48		45	10 1 36	0 5 5	0 2 25
16	3 33 54	0 1 49	0 0 52		46	10 14 58	0 5 12	0 2 28
17	3 47 16	0 1 55	0 0 55		47	10 28 20	0 5 19	0 2 32
18	4 0 38	0 2 2	0 0 58		48	10 41 42	0 5 26	0 2 35
19	4 14 1	0 2 9	0 1 1		49	10 55 5	0 5 32	0 2 38
20	4 27 23	0 2 16	0 1 4		50	11 8 27	0 5 39	0 2 41
21	4 40 45	0 2 22	0 1 8		51	11 21 49	0 5 46	0 2 44
22	4 54 7	0 2 29	0 1 11		52	11 35 11	0 5 53	0 2 48
23	5 7 29	0 2 36	0 1 14		53	11 48 33	0 5 59	0 2 51
24	5 20 51	0 2 43	0 1 17		54	12 1 55	0 6 6	0 2 54
25	5 34 13	0 2 50	0 1 21		55	12 15 17	0 6 13	0 2 57
26	5 47 35	0 2 56	0 1 24		56	12 28 39	0 6 20	0 3 1
27	6 0 58	0 3 3	0 1 27		57	12 42 2	0 6 27	0 3 4
28	6 14 20	0 3 10	0 1 30		58	12 55 24	0 6 33	0 3 7
29	6 27 42	0 3 17	0 1 33		59	13 8 46	0 6 40	0 3 10
30	6 41 4	0 3 23	0 1 37		60	13 22 8	0 6 47	0 3 13

*TABULA MEDII MOTUS LUNÆ, APOGEI ET
NODORUM AB ÆQUINOCTIO, AC LUNÆ A SOLE.*

IN CENTURIIS ANNORUM ANOMALISTICORUM.

<i>Annis Ano- mali- sticis.</i>	<i>Motus Medius Lunæ.</i>				<i>Motus Apogei Lunæ.</i>				<i>Motus Nodorum Lunæ Retrog.</i>				<i>Motus Lunæ a Sole.</i>			
	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>
100	10	20	13	25	3	19	17	30	4	14	14	10	10	18	32	18
200	9	10	26	50	7	8	35	0	8	28	28	20	9	7	4	37
300	8	0	40	15	10	27	52	30	1	12	42	30	7	25	36	55
400	6	20	53	40	2	17	10	0	5	26	56	40	6	14	9	13
500	5	11	7	5	6	6	27	30	10	11	10	50	5	2	41	32
600	4	1	20	30	9	25	45	0	2	25	25	0	3	21	13	50
700	2	21	33	55	1	15	2	30	7	9	39	10	2	9	46	8
800	1	11	47	20	5	4	20	0	11	23	53	20	0	28	18	27
900	0	2	0	45	8	23	37	30	4	8	7	30	11	16	50	45
1000	10	22	14	10	0	12	55	0	8	22	21	40	10	5	23	3
1100	9	12	27	35	4	2	12	30	1	6	35	50	8	23	55	22
1200	8	2	41	0	7	21	30	0	5	20	50	0	7	12	27	40
1300	6	22	54	25	11	10	47	30	10	5	4	10	6	0	59	58
1400	5	13	7	50	3	0	5	0	2	19	18	20	4	19	32	17
1500	4	3	21	15	6	19	22	30	7	3	32	30	3	8	4	35
1600	2	23	34	40	10	8	40	0	11	17	46	40	1	26	36	53
1700	1	13	48	5	1	27	57	30	4	2	0	50	0	15	9	12
1800	0	4	1	30	5	17	15	0	8	16	15	0	11	3	41	30
1900	10	24	14	55	9	6	32	30	1	0	29	10	9	22	13	48
2000	9	14	28	20	0	25	50	0	5	14	43	20	8	10	46	7
2100	8	4	41	45	4	15	7	30	9	28	57	30	6	29	18	25
2200	6	24	55	10	8	4	25	0	2	13	11	40	5	17	50	43
2300	5	15	8	35	11	23	42	30	6	27	25	50	4	6	23	2
2400	4	5	22	0	3	13	0	0	11	11	40	0	2	24	55	20
2500	2	25	35	25	7	2	17	30	3	25	54	10	1	13	27	38
2600	1	15	48	50	10	21	35	0	8	10	8	20	0	1	59	57
2700	0	6	2	15	2	10	52	30	0	24	22	30	10	20	32	15
2800	10	26	15	40	6	0	10	0	5	8	36	40	9	9	4	33
2900	9	16	29	5	9	19	27	30	9	22	50	50	7	27	36	52
3000	8	6	42	30	1	8	45	0	2	7	5	0	6	16	9	10
3100	6	26	55	55	4	28	2	30	6	21	19	10	5	4	41	28
3200	5	17	9	20	8	17	20	0	11	5	33	20	3	23	13	47

EPOCHÆ MEDIORUM MOTUUM LUNÆ
Et Apogei ejus. Annis Julianis ineuntibus.

Annis Juli- anis ineun- tibus.	Luna ab Æqui- noctio.				Apog. Luna ab Æquinoctio.				Annis Juli- anis ineun- tibus.	Luna ab Æqui- noctio.				Apog. Luna ab Æquinoctio.			
	S.	O.	I.	II.	S.	O.	I.	II.		S.	O.	I.	II.	S.	O.	I.	II.
1661	1	18	11	50	5	0	39	30	1696	0	2	3	32	4	14	47	26
62	5	27	34	53	6	11	19	21	97	4	24	37	11	5	25	33	57
63	10	6	57	57	7	21	59	11	98	9	4	0	14	7	6	13	48
64	2	16	21	0	9	2	39	2	99	1	13	23	18	8	16	53	38
1665	7	8	54	39	10	13	25	33	1700	5	22	46	21	9	27	33	29
1666	11	18	17	42	11	24	5	24	1701	10	15	20	0	11	8	20	0
67	3	27	40	46	1	4	45	14	2	2	24	43	3	0	18	59	51
68	8	7	3	49	2	15	25	5	3	7	4	6	7	1	29	39	41
69	0	29	37	28	3	26	11	36	4	11	13	29	10	3	10	19	32
1670	5	9	0	31	5	6	51	27	1705	4	6	2	49	4	21	6	3
1671	9	18	23	35	6	17	31	17	1706	8	15	25	52	6	1	45	54
72	1	27	46	38	7	28	11	8	7	0	24	48	56	7	12	25	44
73	6	20	20	17	9	8	57	39	8	5	4	11	59	8	23	5	35
74	10	29	43	20	10	19	37	30	9	9	26	45	38	10	3	52	6
1675	3	9	6	24	0	0	17	20	1710	2	6	8	41	11	14	31	57
1676	7	18	29	27	1	10	57	11	1711	6	15	31	45	0	25	11	47
77	0	11	3	6	2	21	43	42	12	10	24	54	48	2	5	51	38
78	4	20	26	9	4	2	23	33	13	3	17	28	27	3	16	38	9
79	8	29	49	13	5	13	3	23	14	7	26	51	30	4	27	18	0
1680	1	9	12	16	6	23	43	14	1715	0	6	14	34	6	7	57	50
1681	6	1	45	55	8	4	29	45	1716	4	15	37	37	7	18	37	41
82	10	11	8	58	9	15	9	36	17	9	8	11	16	8	29	24	12
83	2	20	32	2	10	25	49	26	18	1	17	34	19	10	10	4	3
84	6	29	55	5	0	6	29	17	19	5	26	57	23	11	20	43	53
1685	11	22	28	44	1	17	15	48	1720	10	6	20	26	1	1	23	44
1686	4	1	51	47	2	27	55	39	1721	2	28	54	5	2	12	10	15
87	8	11	14	51	4	8	35	29	22	7	8	17	8	3	22	50	6
88	0	20	37	54	5	19	15	20	23	11	17	40	12	5	3	29	56
89	5	13	11	33	7	0	1	51	24	3	27	3	15	6	14	9	47
1690	9	22	34	36	8	10	41	42	1725	8	19	36	54	7	24	56	18
1691	2	1	57	40	9	21	21	32	1726	0	28	59	57	9	5	36	9
92	6	11	20	43	11	2	1	23	27	5	8	23	1	10	16	15	59
93	11	3	54	22	0	12	47	54	28	9	17	46	4	11	26	55	50
94	3	13	17	25	1	23	27	45	29	2	10	19	43	1	7	42	21
1695	7	22	40	29	3	4	7	35	1730	6	19	42	46	2	18	22	12

EPOCHÆ MEDIORUM MOTUUM LUNÆ
Et Apogei ejus. Annis Julianis ineuntibus.

<i>Annis Juli- anis ineun- tibus.</i>	<i>Luna ab Æqui- noctio.</i>				<i>Apog. Luna ab Æquinoctio.</i>				<i>Annis Juli- anis ineun- tibus.</i>	<i>Luna ab Æqui- noctio.</i>				<i>Apog. Luna ab Æquinoctio.</i>			
	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>		<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>	<i>s.</i>	<i>o.</i>	<i>′</i>	<i>″</i>
1731	10	29	5	50	3	29	2	2	1766	9	26	8	7	3	13	16	39
32	3	8	28	53	5	9	41	53	67	2	5	31	11	4	23	56	29
33	8	1	2	32	6	20	28	24	68	6	14	54	14	6	4	36	20
34	0	10	25	35	8	1	8	15	69	11	7	27	53	7	15	22	51
1735	4	19	48	39	9	11	48	5	1770	3	16	50	56	8	26	2	42
1736	8	29	11	42	10	22	27	56	1771	7	26	14	0	10	6	42	32
37	1	21	45	21	0	3	14	27	72	0	5	37	3	11	17	22	23
38	6	1	8	24	1	13	54	18	73	4	28	10	42	0	28	8	54
39	10	10	31	28	2	24	34	8	74	9	7	33	45	2	8	48	45
1740	2	19	54	31	4	5	13	59	1775	1	16	56	49	3	19	28	35
1741	7	12	28	10	5	16	0	30	1776	5	26	19	52	5	0	8	26
42	11	21	51	13	6	26	40	21	77	10	18	53	31	6	10	54	57
43	4	1	14	17	8	7	20	11	78	2	28	16	34	7	21	34	48
44	8	10	37	20	9	18	0	2	79	7	7	39	38	9	2	14	38
1745	1	3	10	59	10	28	46	33	1780	11	17	2	41	10	12	54	29
1746	5	12	34	2	0	9	26	24	1781	4	9	36	20	11	23	41	0
47	9	21	57	6	1	20	6	14	82	8	18	59	23	1	4	20	51
48	2	1	20	9	3	0	46	5	83	0	28	22	27	2	15	0	41
49	6	23	53	48	4	11	32	36	84	5	7	45	30	3	25	40	32
1750	11	3	16	51	5	22	12	27	1785	10	0	19	9	5	6	27	3
1751	3	12	39	55	7	2	52	17	1786	2	9	42	12	6	17	6	54
52	7	22	2	58	8	13	32	8	87	6	19	5	16	7	27	46	44
53	0	14	36	37	9	24	18	39	88	10	28	28	19	9	8	26	35
54	4	23	59	40	11	4	58	30	89	3	21	1	58	10	19	13	6
1755	9	3	22	44	0	15	38	20	1790	8	0	25	1	11	29	52	57
1756	1	12	45	47	1	26	18	11	1791	0	9	48	5	1	10	32	47
57	6	5	19	26	3	7	4	42	92	4	19	11	8	2	21	12	38
58	10	14	42	29	4	17	44	33	93	9	11	44	47	4	1	59	9
59	2	24	5	33	5	28	24	23	94	1	21	7	50	5	12	39	0
1760	7	3	28	36	7	9	4	14	1795	6		30	54	6	23	18	50
1761	11	26	2	15	8	19	50	45	1796	10	9	53	57	8	3	58	41
62	4	5	25	18	10	0	30	36	97	3	2	27	36	9	14	45	12
63	8	14	48	22	11	11	10	26	98	7	11	50	39	10	25	25	3
64	0	24	11	25	0	21	50	17	99	11	21	13	43	0	6	4	53
1765	5	16	45	4	2	2	36	48	1800	4	0	36	46	1	16	44	44

EPOCHÆ MOTUS NODI ASCENDENTIS LUNÆ
Annis Julianis ineuntibus.

Annis Juli- anis ineun- tibus.	Nodus Ascend. ab Æquinoct.	Annis Juli- anis ineun- tibus.	Nodus Ascend. ab Æquinoct.	Annis Juli- anis ineun- tibus.	Nodus Ascend. ab Æquinoct.	Annis Juli- anis ineun- tibus.	Nodus Ascend. ab Æquinoct.
s. o. / //	s. o. / //	s. o. / //	s. o. / //	s. o. / //	s. o. / //	s. o. / //	s. o. / //
1661	6 21 3 50	1696	8 4 8 17	1731	9 17 9 33	1766	11 0 10 49
62	6 1 44 7	97	7 14 45 23	32	8 27 49 50	67	10 10 51 6
63	5 12 24 24	98	6 25 25 40	33	8 8 26 56	68	9 21 31 23
64	4 23 4 41	99	6 6 5 57	34	7 19 7 13	69	9 2 8 29
1665	4 3 41 47	1700	5 16 46 14	1735	6 29 47 30	1770	8 12 48 46
1666	3 14 22 4	1701	4 27 23 20	1736	6 10 27 47	1771	7 23 29 3
67	2 25 2 21	2	4 8 3 37	37	5 21 4 53	72	7 4 9 20
68	2 5 42 38	3	3 18 43 54	38	5 1 45 10	73	6 14 46 26
69	1 16 19 44	4	2 29 24 11	39	4 12 25 27	74	5 25 26 43
1670	0 27 0 1	1705	2 10 1 17	1740	3 23 5 44	1775	5 6 7 0
1671	0 7 40 18	1706	1 20 41 34	1741	3 3 42 50	1776	4 16 47 17
72	11 18 20 35	7	1 1 21 51	42	2 14 23 7	77	3 27 24 23
73	10 28 57 41	8	0 12 2 8	43	1 25 3 24	78	3 8 4 40
74	10 9 37 58	9	11 22 39 14	44	1 5 43 41	79	2 18 44 57
1675	9 20 18 15	1710	11 3 19 31	1745	0 16 20 47	1780	1 29 25 14
1676	9 0 58 32	1711	10 13 59 48	1746	11 27 1 4	1781	1 10 2 20
77	8 11 35 38	12	9 24 40 5	47	11 7 41 21	82	0 20 42 37
78	7 22 15 55	13	9 5 17 11	48	10 18 21 38	83	0 1 22 54
79	7 2 56 12	14	8 15 57 28	49	9 28 58 44	84	11 12 3 11
1680	6 13 36 29	1715	7 26 37 45	1750	9 9 39 1	1785	10 22 40 17
1681	5 24 13 35	1716	7 7 18 2	1751	8 20 19 18	1786	10 3 20 34
82	5 4 53 52	17	6 17 55 8	52	8 0 59 35	87	9 14 0 51
83	4 15 34 9	18	5 28 35 25	53	7 11 36 41	88	8 24 41 8
84	3 26 14 26	19	5 9 15 42	54	6 22 16 58	89	8 5 18 14
1685	3 6 51 32	1720	4 19 55 59	1755	6 2 57 15	1790	7 15 58 31
1686	2 17 31 49	1721	4 0 33 5	1756	5 13 37 32	1791	6 26 38 48
87	1 28 12 6	22	3 11 13 22	57	4 24 14 38	92	6 7 19 5
88	1 8 52 23	23	2 21 53 39	58	4 4 54 55	93	5 17 56 11
89	0 19 29 29	24	2 2 33 56	59	3 15 35 12	94	4 28 36 28
1690	0 0 9 46	1725	1 13 11 2	1760	2 26 15 29	1795	4 9 16 45
1691	11 10 50 3	1726	0 23 51 19	1761	2 6 52 35	1796	3 19 57 2
92	10 21 30 20	27	0 4 31 36	62	1 17 32 52	97	3 0 34 8
93	10 2 7 26	28	11 15 11 53	63	0 28 13 9	98	2 11 14 25
94	9 12 47 43	29	10 25 48 59	64	0 8 53 26	99	1 21 54 42
1695	8 23 28 0	1730	10 6 29 16	1765	11 19 30 32	1800	1 2 34 59

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.

JANUARI I.												FEBRUARI I.												
Die Men- fis.	Motus Medius Luna.				Motus Apogei.				Mot. Nod. Retrog.				Motus Medius Luna.				Motus Apogei.				Mot. Nod. Retrog.			
	S.	O.	I	II	O.	I	II	O.	I	II	S.	O.	I	II	O.	I	II	O.	I	II				
1	0	13	10	35	0	6	41	0	3	11	2	1	38	41	3	33	54	1	41	41				
2	0	26	21	10	0	13	22	0	6	21	2	14	49	16	3	40	35	1	44	52				
3	1	9	31	45	0	20	3	0	9	32	2	27	59	51	3	47	16	1	48	2				
4	1	22	42	20	0	26	44	0	12	43	3	11	10	26	3	53	57	1	51	13				
5	2	5	52	55	0	33	25	0	15	53	3	24	21	1	4	0	37	1	54	24				
6	2	19	3	30	0	40	6	0	19	4	4	7	31	36	4	7	18	1	57	34				
7	3	2	14	5	0	46	47	0	22	14	4	20	42	11	4	14	0	2	0	45				
8	3	15	24	40	0	53	29	0	25	25	5	3	52	46	4	20	41	2	3	55				
9	3	28	35	15	1	0	10	0	28	36	5	17	3	21	4	27	22	2	7	6				
10	4	11	45	50	1	6	51	0	31	46	6	0	13	56	4	34	3	2	10	17				
11	4	24	56	25	1	13	32	0	34	57	6	13	24	31	4	40	44	2	13	27				
12	5	8	7	0	1	20	13	0	38	8	6	26	35	6	4	47	25	2	16	38				
13	5	21	17	35	1	26	54	0	41	18	7	9	45	41	4	54	6	2	19	49				
14	6	4	28	10	1	33	35	0	44	29	7	22	56	16	5	0	47	2	22	59				
15	6	17	38	45	1	40	16	0	47	40	8	6	6	51	5	7	28	2	26	10				
16	7	0	49	20	1	46	57	0	50	50	8	19	17	26	5	14	9	2	29	21				
17	7	13	59	55	1	53	38	0	54	1	9	2	28	1	5	20	50	2	32	31				
18	7	27	10	30	2	0	19	0	57	12	9	15	38	36	5	27	31	2	35	42				
19	8	10	21	5	2	7	0	1	0	22	9	28	49	11	5	34	12	2	38	53				
20	8	23	31	40	2	13	41	1	3	33	10	11	59	46	5	40	54	2	42	3				
21	9	6	42	15	2	20	22	1	6	43	10	25	10	21	5	47	35	2	45	14				
22	9	19	52	50	2	27	3	1	9	54	11	8	20	56	5	54	16	2	48	24				
23	10	3	3	25	2	33	45	1	13	5	11	21	31	31	6	0	57	2	51	35				
24	10	16	14	0	2	40	26	1	16	15	0	4	42	6	6	7	38	2	54	45				
25	10	29	24	36	2	47	7	1	19	26	0	17	52	41	6	14	19	2	57	56				
26	11	12	35	11	2	53	48	1	22	37	1	1	3	16	6	21	0	3	1	7				
27	11	25	45	46	3	0	29	1	25	47	1	14	13	51	6	27	41	3	4	18				
28	0	8	56	21	3	7	10	1	28	58	1	27	24	26	6	34	22	3	7	28				
29	0	22	6	56	3	13	51	1	32	9	In Anno Biftextili post Februarium adde unius diei motum.													
30	1	5	17	31	3	20	32	1	35	19														
31	1	18	28	6	3	27	13	1	38	30														

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.

	M A R T I I.												A P R I L I S.											
Die Man- fis.	Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.			
	S.	O.	I	II	O.	I	II	O.	I	II	S.	O.	I	II	O.	I	II	O.	I	II				
1	2	10	35	I	6	41	4	3	10	39	3	29	3	7	10	8	17	4	49	9				
2	2	23	45	36	6	47	45	3	13	49	4	12	13	42	10	14	58	4	52	19				
3	3	6	56	II	6	54	26	3	17	0	4	25	24	17	10	21	39	4	55	30				
4	3	20	6	46	7	I	7	3	20	II	5	8	34	52	10	28	20	4	58	41				
5	4	3	17	21	7	7	48	3	23	21	5	21	45	27	10	35	I	5	I	51				
6	4	16	27	57	7	14	29	3	26	32	6	4	56	2	10	41	42	5	5	2				
7	4	29	38	32	7	21	10	3	29	43	6	18	6	37	10	48	24	5	8	12				
8	5	12	49	7	7	27	51	3	32	53	7	I	17	12	10	55	5	5	11	23				
9	5	25	59	42	7	34	32	3	36	4	7	14	27	47	11	I	46	5	14	34				
10	6	9	10	17	7	41	13	3	39	14	7	27	38	22	11	8	27	5	17	44				
11	6	22	20	52	7	47	54	3	42	25	8	10	48	57	11	15	8	5	20	55				
12	7	5	31	27	7	54	35	3	45	36	8	23	59	32	11	21	49	5	24	6				
13	7	18	42	2	8	I	17	3	48	46	9	7	10	7	11	28	30	5	27	16				
14	8	I	52	37	8	7	58	3	51	57	9	20	20	42	11	35	11	5	30	27				
15	8	15	3	12	8	14	39	3	55	8	10	3	31	17	11	41	52	5	33	38				
16	8	28	13	47	8	21	20	3	58	18	10	16	41	52	11	48	33	5	36	48				
17	9	11	24	22	8	28	I	4	I	29	10	29	52	27	11	55	14	5	39	59				
18	9	24	34	57	8	34	42	4	4	40	11	13	3	2	12	I	55	5	43	9				
19	10	7	45	32	8	41	23	4	7	50	11	26	13	37	12	8	36	5	46	20				
20	10	20	56	7	8	48	4	4	11	I	0	9	24	12	12	15	17	5	49	31				
21	11	4	6	42	8	54	45	4	14	12	0	22	34	47	12	21	59	5	52	41				
22	11	17	17	17	9	I	26	4	17	22	I	5	45	22	12	28	40	5	55	52				
23	0	0	27	52	9	8	7	4	20	33	I	18	55	57	12	35	21	5	59	3				
24	0	13	38	27	9	14	48	4	23	43	2	2	6	32	12	42	2	6	2	13				
25	0	26	49	2	9	21	29	4	26	54	2	15	17	7	12	48	43	6	5	24				
26	I	9	59	37	9	28	10	4	30	5	2	28	27	42	12	55	24	6	8	35				
27	I	23	10	12	9	34	51	4	33	15	3	11	38	17	13	2	5	6	11	45				
28	2	6	20	47	9	41	33	4	36	26	3	24	48	52	13	8	46	6	14	56				
29	2	19	31	22	9	48	14	4	39	37	4	7	59	27	13	15	27	6	18	6				
30	3	2	41	57	9	54	55	4	42	47	4	21	10	2	13	22	8	6	21	17				
31	3	15	52	32	10	I	36	4	45	58														

**MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.**

Die Men- fis.	M A I I.									J U N I I.								
	Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.		Motus Medius Lunæ.				Motus Apogei.			Mot. Nod. Retrog.	
	S.	O.	I	//	O.	I	//	O.	I	S.	O.	I	//	O.	I	//	O.	I
1	5	4	20	37	13	28	49	6	24	6	22	48	43	16	56	2	8	2
2	5	17	31	12	13	35	30	6	27	7	5	59	18	17	2	43	8	6
3	6	0	41	48	13	42	11	6	30	7	19	9	53	17	9	24	8	9
4	6	13	52	23	13	48	52	6	34	8	2	20	28	17	16	5	8	12
5	6	27	2	58	13	55	33	6	37	8	15	31	3	17	22	46	8	15
6	7	10	13	33	14	2	14	6	40	8	28	41	38	17	29	27	8	18
7	7	23	24	8	14	8	56	6	43	9	11	52	13	17	36	9	8	22
8	8	6	34	43	14	15	37	6	46	9	25	2	49	17	42	50	8	25
9	8	19	45	18	14	22	18	6	49	10	8	13	24	17	49	31	8	28
10	9	2	55	53	14	28	59	6	53	10	21	23	59	17	56	12	8	31
11	9	16	6	28	14	35	40	6	56	11	4	34	34	18	2	53	8	34
12	9	29	17	3	14	42	21	6	59	11	17	45	9	18	9	34	8	37
13	10	12	27	38	14	49	2	7	2	0	0	55	44	18	16	15	8	41
14	10	25	38	13	14	55	43	7	5	0	14	6	19	18	22	56	8	44
15	11	8	48	48	15	2	24	7	8	0	27	16	54	18	29	37	8	47
16	11	21	59	53	15	9	5	7	12	1	10	27	29	18	36	18	8	50
17	0	5	9	58	15	15	46	7	15	1	23	38	4	18	42	59	8	53
18	0	18	20	33	15	22	27	7	18	2	6	48	39	18	49	40	8	56
19	1	1	31	8	15	29	8	7	21	2	19	59	14	18	56	21	9	0
20	1	14	41	43	15	35	49	7	24	3	3	9	49	19	3	2	9	3
21	1	27	52	18	15	42	31	7	28	3	16	20	24	19	9	44	9	6
22	2	11	2	53	15	49	12	7	31	3	29	30	59	19	16	25	9	9
23	2	24	13	28	15	55	53	7	34	4	12	41	34	19	23	6	9	12
24	3	7	24	3	16	2	34	7	37	4	25	52	9	19	29	47	9	16
25	3	20	34	38	16	9	15	7	40	5	9	2	44	19	36	28	9	19
26	4	3	45	13	16	15	56	7	43	5	22	13	19	19	43	9	9	22
27	4	16	55	48	16	22	37	7	47	6	5	23	54	19	49	50	9	25
28	5	0	6	23	16	29	18	7	50	6	18	34	29	19	56	31	9	28
29	5	13	16	58	16	35	59	7	53	7	1	45	4	20	3	12	9	31
30	5	26	27	33	16	42	40	7	56	7	14	55	39	20	9	53	9	35
31	6	9	38	8	16	49	21	7	59									

MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.

Die Men- fis.	JULII.												AUGUSTI.											
	Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.			
	S.	O.	I.	II.	O.	I.	II.	O.	I.	II.			S.	O.	I.	II.	O.	I.	II.	O.	I.	II.		
1	7	28	6	14	20	16	34	9	38	17			9	16	34	20	23	43	47	11	16	47		
2	8	11	16	49	20	23	15	9	41	27			9	29	44	55	23	50	28	11	19	57		
3	8	24	27	24	20	29	56	9	44	38			10	12	55	30	23	57	9	11	23	8		
4	9	7	37	59	20	36	37	9	47	49			10	26	6	5	24	3	50	11	26	18		
5	9	20	48	34	20	43	18	9	50	59			11	9	16	40	24	10	31	11	29	29		
6	10	3	59	9	20	49	59	9	54	10			11	22	27	15	24	17	12	11	32	40		
7	10	17	9	44	20	56	41	9	57	20			0	5	37	50	24	23	53	11	35	50		
8	11	0	20	19	21	3	22	10	0	31			0	18	48	25	24	30	35	11	39	1		
9	11	13	30	54	21	10	3	10	3	42			1	1	59	0	24	37	16	11	42	12		
10	11	26	41	30	21	16	44	10	6	52			1	15	9	35	24	43	57	11	45	22		
11	0	9	52	5	21	23	25	10	10	3			1	28	20	10	24	50	38	11	48	33		
12	0	23	2	40	21	30	6	10	13	14			2	11	30	45	24	57	19	11	51	44		
13	1	6	13	15	21	36	47	10	16	24			2	24	41	20	25	4	0	11	54	54		
14	1	19	23	50	21	43	28	10	19	35			3	7	51	55	25	10	41	11	58	5		
15	2	2	34	25	21	50	9	10	22	46			3	21	2	30	25	17	22	12	1	16		
16	2	15	45	0	21	56	50	10	25	56			4	4	13	5	25	24	3	12	4	26		
17	2	28	55	35	22	3	31	10	29	7			4	17	23	40	25	30	44	12	7	37		
18	3	12	6	10	22	10	12	10	32	17			5	0	34	15	25	37	25	12	10	47		
19	3	25	16	45	22	16	53	10	35	28			5	13	44	50	25	44	6	12	13	58		
20	4	8	27	20	22	23	34	10	38	39			5	26	55	25	25	50	47	12	17	9		
21	4	21	37	55	22	30	16	10	41	49			6	10	6	0	25	57	29	12	20	19		
22	5	4	48	30	22	36	57	10	45	0			6	23	16	35	26	4	10	12	23	30		
23	5	17	59	5	22	43	38	10	48	11			7	6	27	10	26	10	51	12	26	40		
24	6	1	9	40	22	50	19	10	51	21			7	19	37	45	26	17	32	12	29	51		
25	6	14	20	15	22	57	0	10	54	32			8	2	48	20	26	24	13	12	33	2		
26	6	27	30	50	23	3	41	10	57	43			8	15	58	55	26	30	54	12	36	13		
27	7	10	41	25	23	10	22	11	0	53			8	29	9	30	26	37	35	12	39	23		
28	7	23	52	0	23	17	3	11	4	4			9	12	20	5	26	44	16	12	42	34		
29	8	7	2	35	23	23	44	11	7	14			9	25	30	40	26	50	57	12	45	44		
30	8	20	13	10	23	30	25	11	10	25			10	8	41	15	26	57	38	12	48	55		
31	9	3	23	45	23	37	6	11	13	36			10	21	51	50	27	4	19	12	52	6		

**MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.**

S E P T E M B R I S.												O C T O B R I S.												
Die Men- fis.	Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.				Motus Medius Lunæ.				Motus Apogei.				Mot. Nod. Retrog.			
	S.	O.	I	II	S.	O.	I	II	O.	I	II	S.	O.	I	II	S.	O.	I	II	O.	I	II		
1	II	5	2	26	0	27	II	0	12	55	17	0	10	19	56	I	0	31	32	14	30	36		
2	II	18	13	I	0	27	17	41	12	58	27	0	23	30	31	I	0	38	13	14	33	46		
3	0	I	23	36	0	27	24	22	13	I	38	I	6	41	6	I	0	44	54	14	36	57		
4	0	14	34	II	0	27	31	3	13	4	49	I	19	51	41	I	0	51	35	14	40	8		
5	0	27	44	46	0	27	37	44	13	7	59	2	3	2	16	I	0	58	16	14	43	18		
6	I	10	55	21	0	27	44	25	13	11	10	2	16	12	51	I	I	4	57	14	46	29		
7	I	24	5	56	0	27	51	6	13	14	20	2	29	23	26	I	I	11	39	14	49	39		
8	2	7	16	31	0	27	57	48	13	17	31	3	12	34	I	I	I	18	20	14	52	50		
9	2	20	27	6	0	28	4	29	13	20	42	3	25	44	36	I	I	25	I	14	56	I		
10	3	3	37	41	0	28	11	10	13	23	52	4	8	55	11	I	I	31	42	14	59	11		
11	3	16	48	16	0	28	17	51	13	27	3	4	22	5	46	I	I	38	23	15	2	22		
12	3	29	58	51	0	28	24	32	13	30	14	5	5	16	21	I	I	45	4	15	5	33		
13	4	13	9	26	0	28	31	13	13	33	24	5	18	26	56	I	I	51	45	15	8	43		
14	4	26	20	I	0	28	37	54	13	36	35	6	I	37	31	I	I	58	27	15	11	54		
15	5	9	30	36	0	28	44	35	13	39	46	6	14	48	6	I	2	5	8	15	15	5		
16	5	22	41	II	0	28	51	16	13	42	56	6	27	58	41	I	2	11	49	15	18	15		
17	6	5	51	46	0	28	57	57	13	46	7	7	11	9	16	I	2	18	30	15	21	26		
18	6	19	2	21	0	29	4	38	13	49	17	7	24	19	51	I	2	25	11	15	24	36		
19	7	2	12	56	0	29	11	19	13	52	28	8	7	30	26	I	2	31	52	15	27	47		
20	7	15	23	31	0	29	18	0	13	55	39	8	20	41	I	I	2	38	33	15	30	58		
21	7	28	34	6	0	29	24	42	13	58	49	9	3	51	36	I	2	45	14	15	34	8		
22	8	11	44	41	0	29	31	23	14	2	0	9	17	2	11	I	2	51	55	15	37	19		
23	8	24	55	16	0	29	38	4	14	5	11	10	0	12	46	I	2	58	36	15	40	29		
24	9	8	5	51	0	29	44	45	14	8	21	10	13	23	21	I	3	5	17	15	43	40		
25	9	21	16	26	0	29	51	26	14	11	32	10	26	33	56	I	3	11	58	15	46	51		
26	10	4	27	I	0	29	58	7	14	14	42	11	9	44	31	I	3	18	39	15	50	I		
27	10	17	37	36	I	0	4	48	14	17	53	11	22	55	6	I	3	25	20	15	53	12		
28	11	0	48	II	I	0	11	29	14	21	4	0	6	5	41	I	3	32	2	15	56	22		
29	11	13	58	46	I	0	18	10	14	24	14	0	19	16	16	I	3	38	43	15	59	33		
30	11	27	9	21	I	0	24	51	14	27	25	I	2	26	51	I	3	45	24	16	2	44		
31												I	15	37	26	I	3	52	5	16	5	55		

**MEDII MOTUS LUNÆ, APOGEI ET NODORUM
EJUS AD DIES MENSIVM.**

Die Men- fis.	NOVEMBRIS.						DECEMBRIS.					
	Motus Medius Lunæ.			Motus Apogei.			Motus Medius Lunæ.			Motus Apogei.		
	S.	O.	I.	S.	O.	I.	S.	O.	I.	S.	O.	I.
1	1	28	48	1	3	58	3	4	5	1	7	19
2	2	11	58	1	4	5	3	17	16	1	7	25
3	2	25	9	1	4	12	4	0	26	1	7	32
4	3	8	19	1	4	18	4	13	37	1	7	39
5	3	21	30	1	4	25	4	26	47	1	7	46
6	4	4	40	1	4	32	5	9	58	1	7	52
7	4	17	51	1	4	38	5	23	9	1	7	59
8	5	1	2	1	4	45	6	6	19	1	8	6
9	5	14	12	1	4	52	6	19	30	1	8	12
10	5	27	23	1	4	58	7	2	40	1	8	19
11	6	10	33	1	5	5	7	15	51	1	8	26
12	6	23	44	1	5	12	7	29	1	1	8	32
13	7	6	55	1	5	18	8	12	12	1	8	39
14	7	20	5	1	5	25	8	25	23	1	8	46
15	8	3	16	1	5	32	9	8	33	1	8	52
16	8	16	26	1	5	39	9	21	44	1	8	59
17	8	29	37	1	5	45	10	4	54	1	9	6
18	9	12	47	1	5	52	10	18	5	1	9	12
19	9	25	58	1	5	59	11	1	16	1	9	19
20	10	9	9	1	6	5	11	14	26	1	9	26
21	10	22	19	1	6	12	11	27	37	1	9	33
22	11	5	30	1	6	19	0	10	47	1	9	39
23	11	18	40	1	6	25	0	23	58	1	9	46
24	0	1	51	1	6	32	1	7	8	1	9	53
25	0	15	2	1	6	39	1	20	19	1	9	59
26	0	28	12	1	6	45	2	3	30	1	10	6
27	1	11	23	1	6	52	2	16	40	1	10	13
28	1	24	33	1	6	59	2	29	51	1	10	19
29	2	7	44	1	7	5	3	13	1	1	10	26
30	2	20	54	1	7	12	3	26	12	1	10	33
31							4	9	23	1	10	39

**MEDII MOTUS LUNÆ, APOGEI ET NODORUM
AD HORAS ET MINUTA HORARIA.**

	Mot. Med. Lunæ.	Apogei Lunæ.	Mot. Nod. Lunæ.		Mot. Med. Lunæ.	Apogei Lunæ.	Mot. Nod. Lunæ.
H.	o. 1 11	o. 1 11	o. 1 11	H.	o. 1 11	o. 1 11	o. 1 11
0	0 0 0	0 0 0	0 0 0	30	16 28 14	0 8 21	0 3 58
1	0 32 56	0 0 17	0 0 8	31	17 1 10	0 8 38	0 4 6
2	1 5 53	0 0 33	0 0 16	32	17 34 7	0 8 54	0 4 14
3	1 38 49	0 0 50	0 0 24	33	18 7 3	0 9 11	0 4 22
4	2 11 46	0 1 7	0 0 32	34	18 39 59	0 9 28	0 4 30
5	2 44 42	0 1 24	0 0 40	35	19 12 55	0 9 45	0 4 38
6	3 17 39	0 1 40	0 0 48	36	19 45 52	0 10 2	0 4 46
7	3 50 35	0 1 57	0 0 56	37	20 18 48	0 10 19	0 4 54
8	4 23 32	0 2 14	0 1 4	38	20 51 45	0 10 36	0 5 2
9	4 56 28	0 2 30	0 1 12	39	21 24 41	0 10 52	0 5 10
10	5 29 25	0 2 47	0 1 19	40	21 57 38	0 11 8	0 5 18
11	6 2 21	0 3 4	0 1 27	41	22 30 34	0 11 25	0 5 26
12	6 35 18	0 3 21	0 1 35	42	23 3 31	0 11 42	0 5 34
13	7 8 14	0 3 37	0 1 43	43	23 36 27	0 11 59	0 5 42
14	7 41 10	0 3 54	0 1 51	44	24 9 24	0 12 16	0 5 50
15	8 14 7	0 4 11	0 1 59	45	24 42 20	0 12 32	0 5 57
16	8 47 3	0 4 27	0 2 7	46	25 15 17	0 12 48	0 6 5
17	9 20 0	0 4 44	0 2 15	47	25 48 13	0 13 5	0 6 13
18	9 52 56	0 5 1	0 2 23	48	26 21 10	0 13 22	0 6 21
19	10 25 53	0 5 18	0 2 31	49	26 54 6	0 13 39	0 6 29
20	10 58 49	0 5 34	0 2 39	50	27 27 3	0 13 56	0 6 37
21	11 31 46	0 5 51	0 2 47	51	27 59 59	0 14 13	0 6 45
22	12 4 42	0 6 8	0 2 55	52	28 32 56	0 14 30	0 6 53
23	12 37 39	0 6 24	0 3 3	53	29 5 52	0 14 46	0 7 1
24	13 10 35	0 6 41	0 3 11	54	29 38 49	0 15 2	0 7 9
25	13 43 32	0 6 58	0 3 19	55	30 11 45	0 15 19	0 7 17
26	14 16 28	0 7 15	0 3 27	56	30 44 42	0 15 36	0 7 25
27	14 49 24	0 7 31	0 3 34	57	31 17 38	0 15 53	0 7 33
28	15 22 21	0 7 48	0 3 42	58	31 50 34	0 16 10	0 7 41
29	15 55 17	0 8 5	0 3 50	59	32 23 31	0 16 26	0 7 49
30	16 28 14	0 8 21	0 3 58	60	32 56 27	0 16 43	0 7 56

TABULA MEDII MOTUS LUNÆ, APOGEI ET
NODORUM AB ÆQUINOCTIO, AC LUNÆ A SOLE.

IN CENTURIIS ANNORUM JULIANORUM.

Annis Juli- anis.	Motus Medius Lunæ.				Motus Apogei Lunæ.				Motus Nodorum Lunæ Retrog.				Motus Lunæ a Sole.			
	S.	O.	I	II	S.	O.	I	II	S.	O.	I	II	S.	O.	I	II
100	10	7	50	25	3	19	11	15	4	14	11	15	10	7	4	53
200	8	15	40	50	7	8	22	30	8	28	22	30	8	14	9	46
300	6	23	31	15	10	27	33	45	1	12	33	45	6	21	14	39
400	5	1	21	40	2	16	45	0	5	26	45	0	4	28	19	32
500	3	9	12	5	6	5	56	15	10	10	56	15	3	5	24	25
600	1	17	2	30	9	25	7	30	2	25	7	30	1	12	29	18
700	11	24	52	55	1	14	18	45	7	9	18	45	11	19	34	11
800	10	2	43	20	5	3	30	0	11	23	30	0	9	26	39	4
900	8	10	33	45	8	22	41	15	4	7	41	15	8	3	43	57
1000	6	18	24	10	0	11	52	30	8	21	52	30	6	10	48	50
1100	4	26	14	35	4	1	3	45	1	6	3	45	4	17	53	43
1200	3	4	5	0	7	20	15	0	5	20	15	0	2	24	58	36
1300	1	11	55	25	11	9	26	15	10	4	26	15	1	2	3	29
1400	11	19	45	50	2	28	37	30	2	18	37	30	11	9	8	22
1500	9	27	36	15	6	17	48	45	7	2	48	45	9	16	13	15
1600	8	5	26	40	10	7	0	0	11	17	0	0	7	23	18	8
1700	6	13	17	5	1	26	11	15	4	1	11	15	6	0	23	1
1800	4	21	7	30	5	15	22	30	8	15	22	30	4	7	27	54
1900	2	28	57	55	9	4	33	45	0	29	33	45	2	14	32	47
2000	1	6	48	20	0	23	45	0	5	13	45	0	0	21	37	40
2100	11	14	38	45	4	12	56	15	9	27	56	15	10	28	42	33
2200	9	22	29	10	8	2	7	30	2	12	7	30	9	5	47	26
2300	8	0	19	35	11	21	18	45	6	26	18	45	7	12	52	19
2400	6	8	10	0	3	10	30	0	11	10	30	0	5	19	57	12
2500	4	16	0	25	6	29	41	15	3	24	41	15	3	27	2	5
2600	2	23	50	50	10	18	52	30	8	8	52	30	2	4	6	58
2700	1	1	41	15	2	8	3	45	0	23	3	45	0	11	11	51
2800	11	9	31	40	5	27	15	0	5	7	15	0	10	18	16	44
2900	9	17	22	5	9	16	26	15	9	21	26	15	8	25	21	37
3000	7	25	12	30	1	5	37	30	2	5	37	30	7	2	26	30
3100	6	3	2	55	4	24	48	45	6	19	48	45	5	9	31	23
3200	4	10	53	20	8	14	0	0	11	4	0	0	3	16	36	16

TABULA EQUATIONUM ANNUARUM LUNAE, APOGEI ET NODORUM.

Anomalia Media Solis.

Ano- mal. med. Solis.	Sig. o.			Sig. I.			Sig. II.			Gr.
	<i>Æq. D.</i>	<i>Apog.</i>	<i>Nod.</i>	<i>Lunæ</i>	<i>Apog.</i>	<i>Nod.</i>	<i>Lunæ</i>	<i>Apog.</i>	<i>Nod.</i>	
	<i>Adde.</i>	<i>Subtr.</i>	<i>Adde.</i>	<i>Adde.</i>	<i>Subtr.</i>	<i>Adde.</i>	<i>Adde.</i>	<i>Subtr.</i>	<i>Adde.</i>	
	<i>/</i>	<i>//</i>	<i>/</i>	<i>/</i>	<i>//</i>	<i>/</i>	<i>/</i>	<i>//</i>	<i>/</i>	
0	0 0	0 0	0 0	5 47	9 49	4 40	10 7	17 8	8 9	30
1	0 12	0 20	0 9	5 58	10 7	4 48	10 14	17 19	8 14	29
2	0 24	0 41	0 19	6 9	10 24	4 57	10 20	17 29	8 19	28
3	0 36	1 1	0 29	6 19	10 42	5 5	10 26	17 39	8 24	27
4	0 48	1 22	0 39	6 29	10 59	5 13	10 31	17 48	8 28	26
5	1 0	1 42	0 48	6 39	11 16	5 21	10 37	17 58	8 32	25
6	1 12	2 3	0 58	6 49	11 33	5 29	10 42	18 7	8 36	24
7	1 24	2 23	1 8	6 59	11 49	5 37	10 47	18 16	8 40	23
8	1 36	2 43	1 18	7 9	12 6	5 45	10 52	18 24	8 44	22
9	1 48	3 4	1 27	7 19	12 22	5 53	10 56	18 32	8 48	21
10	1 59	3 24	1 37	7 28	12 39	6 0	11 1	18 39	8 52	20
11	2 11	3 44	1 46	7 37	12 55	6 8	11 5	18 46	8 55	19
12	2 23	4 4	1 56	7 46	13 10	6 15	11 9	18 53	8 58	18
13	2 35	4 24	2 5	7 55	13 26	6 22	11 14	19 0	9 2	17
14	2 46	4 44	2 15	8 4	13 41	6 30	11 19	19 6	9 5	16
15	2 58	5 4	2 24	8 13	13 56	6 37	11 22	19 12	9 7	15
16	3 10	5 24	2 34	8 22	14 10	6 44	11 25	19 18	9 10	14
17	3 22	5 44	2 43	8 31	14 25	6 50	11 28	19 23	9 12	13
18	3 34	6 3	2 53	8 39	14 39	6 57	11 30	19 28	9 15	12
19	3 46	6 23	3 2	8 47	14 53	7 4	11 32	19 33	9 17	11
20	3 57	6 43	3 11	8 55	15 7	7 11	11 35	19 37	9 19	10
21	4 9	7 2	3 20	9 3	15 21	7 17	11 38	19 41	9 21	9
22	4 20	7 21	3 29	9 11	15 33	7 23	11 40	19 44	9 22	8
23	4 31	7 40	3 38	9 19	15 46	7 29	11 42	19 48	9 24	7
24	4 42	7 59	3 47	9 27	15 58	7 35	11 43	19 51	9 25	6
25	4 53	8 18	3 56	9 34	16 11	7 41	11 45	19 53	9 26	5
26	5 4	8 36	4 5	9 41	16 23	7 46	11 46	19 55	9 27	4
27	5 15	8 54	4 14	9 47	16 35	7 52	11 47	19 57	9 28	3
28	5 26	9 13	4 23	9 54	16 46	7 58	11 48	19 58	9 29	2
29	5 37	9 31	4 31	10 1	16 57	8 4	11 48	19 59	9 29	1
30	5 47	9 49	4 40	10 7	17 8	8 9	11 49	20 0	9 30	0
	<i>Subtr.</i>	<i>Adde.</i>	<i>Subtr.</i>	<i>Subtr.</i>	<i>Adde.</i>	<i>Subtr.</i>	<i>Subtr.</i>	<i>Adde.</i>	<i>Subtr.</i>	<i>Gr.</i>
	Sig. XI.			Sig. X.			Sig. IX.			

TABULA EQUATIONUM ANNUARUM LUNÆ, APOGEI ET NODORUM.

Anomalia Media Solis.

Ano- mal. med. Solis.	Sig. III.			Sig. IV.			Sig. V.			Gr.
	Æq. ☾	Apog.	Nod.	Luna	Apog.	Nod.	Luna	Apog.	Nod.	
	Adde.	Subtr.	Adde.	Adde.	Subtr.	Adde.	Adde.	Subtr.	Adde.	
Gr.	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	
0	11 49	20 0	9 30	10 21	17 30	8 19	6 0	10 11	4 50	30
1	11 49	20 0	9 30	10 15	17 20	8 14	5 49	9 52	4 41	29
2	11 49	20 0	9 30	10 7	17 9	8 9	5 38	9 33	4 32	28
3	11 48	19 59	9 30	10 1	16 58	8 4	5 27	9 15	4 23	27
4	11 48	19 58	9 29	9 55	16 46	7 58	5 16	8 56	4 14	26
5	11 47	19 57	9 29	9 47	16 34	7 53	5 5	8 37	4 5	25
6	11 47	19 56	9 28	9 40	16 23	7 48	4 53	8 17	3 56	24
7	11 45	19 54	9 27	9 33	16 11	7 42	4 42	7 58	3 47	23
8	11 44	19 51	9 26	9 26	15 58	7 35	4 30	7 38	3 38	22
9	11 42	19 49	9 25	9 19	15 45	7 29	4 18	7 18	3 29	21
10	11 41	19 46	9 24	9 11	15 32	7 23	4 6	6 58	3 19	20
11	11 39	19 42	9 22	9 2	15 18	7 16	3 54	6 38	3 9	19
12	11 36	19 38	9 20	8 54	15 4	7 9	3 43	6 18	2 59	18
13	11 34	19 34	9 18	8 46	14 50	7 3	3 31	5 58	2 50	17
14	11 31	19 30	9 16	8 37	14 36	6 56	3 19	5 38	2 40	16
15	11 29	19 25	9 14	8 28	14 21	6 49	3 7	5 17	2 30	15
16	11 25	19 20	9 12	8 20	14 6	6 42	2 54	4 56	2 20	14
17	11 22	19 14	9 9	8 11	13 51	6 35	2 42	4 35	2 10	13
18	11 19	19 8	9 6	8 1	13 35	6 27	2 30	4 14	2 0	12
19	11 15	19 2	9 3	7 52	13 20	6 20	2 18	3 54	1 50	11
20	11 11	18 55	8 59	7 43	13 4	6 12	2 5	3 33	1 40	10
21	11 6	18 48	8 56	7 34	12 48	6 4	1 52	3 12	1 30	9
22	11 2	18 41	8 52	7 24	12 31	5 56	1 40	2 51	1 20	8
23	10 58	18 33	8 49	7 14	12 15	5 49	1 28	2 30	1 10	7
24	10 53	18 25	8 45	7 3	11 58	5 41	1 15	2 8	1 0	6
25	10 48	18 17	8 41	6 53	11 41	5 33	1 2	1 46	0 50	5
26	10 43	18 8	8 37	6 43	11 23	5 24	0 49	1 25	0 40	4
27	10 38	17 59	8 33	6 33	11 5	5 16	0 37	1 4	0 30	3
28	10 32	17 50	8 28	6 22	10 47	5 8	0 25	0 43	0 20	2
29	10 26	17 40	8 23	6 11	10 29	4 59	0 12	0 21	0 10	1
30	10 21	17 30	8 19	6 0	10 11	4 50	0 0	0 0	0 0	0
	Subtr.	Adde.	Subtr.	Subtr.	Adde.	Subtr.	Subtr.	Adde.	Subtr.	Gr.
	Sig. VIII.			Sig. VII.			Sig. VI.			

ÆQUATIONES LUNÆ MINORES.

Æquatio Semestris prima.					Æquatio Semestris altera.					Æquatio Quarta Luna.				
Argumentum Annuum.					Solis a Nodo Distantia.					Argument. Quartæ Equationis.				
Sig. o. 6. Subtr.	1. 7. Subtr.	2. 8. Subtr.			Sig. o. 6. Subtr.	1. 7. Subtr.	2. 8. Subtr.			Sig. { 0 Add. 6 Subtr.	1 Add. 7 Subtr.	2 Add. 8 Subtr.		
Gr. / /	/ /	/ /			Gr. / /	/ /	/ /			Gr. / /	/ /	/ /		
0 0 0	3 15	3 15	30		0 0 0	0 41	0 41	30		0 0 0	1 12	2 5	30	
1 0 8	3 19	3 11	29		1 0 1	0 41	0 40	29		1 0 2	1 15	2 7	29	
2 0 16	3 22	3 6	28		2 0 3	0 42	0 39	28		2 0 5	1 17	2 8	28	
3 0 23	3 25	3 2	27		3 0 5	0 43	0 38	27		3 0 7	1 19	2 9	27	
4 0 31	3 28	2 57	26		4 0 6	0 43	0 37	26		4 0 10	1 21	2 10	26	
5 0 39	3 31	2 52	25		5 0 8	0 44	0 36	25		5 0 12	1 23	2 11	25	
6 0 47	3 34	2 47	24		6 0 10	0 44	0 35	24		6 0 15	1 25	2 12	24	
7 0 54	3 36	2 41	23		7 0 11	0 45	0 34	23		7 0 17	1 27	2 13	23	
8 1 2	3 38	2 36	22		8 0 13	0 45	0 32	22		8 0 20	1 29	2 14	22	
9 1 9	3 40	2 30	21		9 0 14	0 46	0 31	21		9 0 22	1 31	2 15	21	
10 1 17	3 42	2 24	20		10 0 16	0 46	0 30	20		10 0 25	1 33	2 16	20	
11 1 24	3 43	2 18	19		11 0 17	0 46	0 29	19		11 0 27	1 35	2 17	19	
12 1 31	3 44	2 12	18		12 0 19	0 47	0 27	18		12 0 30	1 37	2 17	18	
13 1 38	3 44	2 5	17		13 0 20	0 47	0 26	17		13 0 32	1 39	2 18	17	
14 1 46	3 45	1 59	16		14 0 22	0 47	0 25	16		14 0 35	1 41	2 19	16	
15 1 52	3 45	1 52	15		15 0 23	0 47	0 23	15		15 0 37	1 43	2 20	15	
16 1 59	3 45	1 46	14		16 0 25	0 47	0 22	14		16 0 40	1 44	2 20	14	
17 2 5	3 44	1 38	13		17 0 26	0 47	0 20	13		17 0 42	1 46	2 21	13	
18 2 12	3 44	1 31	12		18 0 27	0 47	0 19	12		18 0 44	1 48	2 21	12	
19 2 18	3 43	1 24	11		19 0 29	0 46	0 17	11		19 0 46	1 49	2 22	11	
20 2 24	3 42	1 17	10		20 0 30	0 46	0 16	10		20 0 49	1 51	2 22	10	
21 2 30	3 40	1 9	9		21 0 31	0 46	0 14	9		21 0 51	1 52	2 23	9	
22 2 36	3 38	1 2	8		22 0 32	0 45	0 13	8		22 0 54	1 54	2 23	8	
23 2 41	3 36	0 54	7		23 0 34	0 45	0 11	7		23 0 56	1 55	2 24	7	
24 2 47	3 34	0 47	6		24 0 35	0 44	0 10	6		24 0 59	1 57	2 24	6	
25 2 52	3 31	0 39	5		25 0 36	0 44	0 8	5		25 1 1	1 58	2 24	5	
26 2 57	3 28	0 31	4		26 0 37	0 43	0 6	4		26 1 3	2 0	2 24	4	
27 3 2	3 25	0 23	3		27 0 38	0 43	0 5	3		27 1 5	2 1	2 25	3	
28 3 6	3 22	0 16	2		28 0 39	0 42	0 3	2		28 1 8	2 3	2 25	2	
29 3 11	3 19	0 8	1		29 0 40	0 41	0 1	1		29 1 10	2 4	2 25	1	
30 3 15	3 15	0 0	0		30 0 41	0 41	0 0	0		30 1 12	2 5	2 25	0	
Sig. 5. 11. Adde.	4. 10. Adde.	3. 9. Adde.	Gr.		Sig. 5. 11. Adde.	4. 10. Adde.	3. 9. Adde.	Gr.		Sig. { 5 Add. 11 Sub.	4 Add. 10 Sub.	3 Add. 9 Sub.	Gr.	

**TABULA ÆQUATIONUM APOGEI ET
ECCENTRICITATUM ORBIS LUNÆ.**

Sig. O. VI.

Argu- ment. Ann.	Æqu. Apog. Lunæ Adde.			Diff.	Eccentric. Orbis Lu- næ ad Ra- dium 1.	Diff.	Logarithmi harum Eccentrici- tatum.	Logarithmi pro Æqua- tione centri Lunæ.	Diff.	
Gr.	o.	i	ii	i	ii					
0	0	0	0				,066777	8 824629	9 941912	30
1	0	21	4	21	4	5	,066771	8 824590	9 941917	29
2	0	42	8	21	4	17	,066754	8 824475	9 941932	28
3	1	3	10	21	2	30	,066724	8 824284	9 941958	27
4	1	24	9	20	59	41	,066683	8 824016	9 941994	26
5	1	45	5	20	56	53	,066630	8 823671	9 942040	25
6	2	5	57	20	52	64	,066566	8 823252	9 942096	24
7	2	26	44	20	47	76	,066489	8 822753	9 942163	23
8	2	47	25	20	41	88	,066402	8 822179	9 942239	22
9	3	8	0	20	35	100	,066302	8 821529	9 942326	21
10	3	28	27	20	27	110	,066192	8 820803	9 942422	20
11	3	48	46	20	19	121	,066070	8 820001	9 942529	19
12	4	8	55	20	9	133	,065936	8 819124	9 942645	18
13	4	28	54	19	59	144	,065792	8 818170	9 942771	17
14	4	48	42	19	48	156	,065636	8 817142	9 942907	16
15	5	8	19	19	37	167	,065469	8 816038	9 943053	15
16	5	27	43	19	24	177	,065292	8 814858	9 943208	14
17	5	46	53	19	10	188	,065103	8 813604	9 943372	13
18	6	5	48	18	55	198	,064905	8 812275	9 943545	12
19	6	24	27	18	39	209	,064695	8 810873	9 943728	11
20	6	42	50	18	23	219	,064476	8 809397	9 943919	10
21	7	0	56	18	6	230	,064246	8 807847	9 944120	9
22	7	18	44	17	48	239	,064006	8 806223	9 944329	8
23	7	36	12	17	28	249	,063757	8 804528	9 944546	7
24	7	53	20	17	8	259	,063498	8 802760	9 944772	6
25	8	10	6	16	46	268	,063230	8 800920	9 945006	5
26	8	26	29	16	23	277	,062952	8 799009	9 945248	4
27	8	42	29	16	0	287	,062665	8 797028	9 945498	3
28	8	58	5	15	36	295	,062370	8 794978	9 945755	2
29	9	13	15	15	10	303	,062066	8 792857	9 946020	1
30	9	27	57	14	42	312	,061754	8 790668	9 946292	0
	Subtrahere.			Diff.		Diff.			Diff.	Gr.

Sig. V. XI.

**TABULA ÆQUATIONUM APOGEI ET
ECCENTRICITATUM ORBIS LUNÆ.**

Sig. I. VII.

Argu- ment. Ann.	Æqu. Apog. Lunæ Adde.			Diff.	Eccentric. Orbis Lu- næ ad Ra- dium 1.	Diff.	Logarithmi harum Eccentrici- tatum.	Logarithmi pro Æqua- tione centri Lunæ.	Diff.	
Gr.	o.	1	11	1	11					
0	9	27	57				8 790668	9 946292		30
				14	15	320			279	
1	9	42	12				8 788412	9 946571	286	29
2	9	55	58	13	46	327	8 786089	9 946857	292	28
3	10	9	14	13	16	335	8 783701	9 947149	298	27
4	10	21	58	12	44	342	8 781248	9 947448	304	26
5	10	34	9	12	11	349	8 778732	9 947752	310	25
				11	38	355				
6	10	45	47				8 776153	9 948062	315	24
7	10	56	49	11	2	362	8 773513	9 948377	320	23
8	11	7	15	10	26	368	8 770814	9 948698	325	22
9	11	17	4	9	49	373	8 768057	9 949023	330	21
10	11	26	14	9	10	378	8 765243	9 949353	334	20
				8	29	383				
11	11	34	43				8 762375	9 949687	338	19
12	11	42	31	7	48	388	8 759454	9 950025	341	18
13	11	49	36	7	5	392	8 756482	9 950367	345	17
14	11	55	57	6	21	396	8 753461	9 950712	347	16
15	12	1	33	5	36	399	8 750395	9 951059	350	15
				4	49	401				
16	12	6	22				8 747284	9 951409	352	14
17	12	10	23	4	1	404	8 744131	9 951761	354	13
18	12	13	35	3	12	406	8 740941	9 952115	355	12
19	12	15	56	2	21	407	8 737714	9 952470	356	11
20	12	17	24	1	28	409	8 734455	9 952827	356	10
				0	35	409				
21	12	17	59				8 731167	9 953183	356	9
22	12	17	40	0	19	410	8 727853	9 953540	356	8
23	12	16	25	1	15	408	8 724518	9 953896	355	7
24	12	14	13	2	12	408	8 721164	9 954251	354	6
25	12	11	2	3	11	407	8 717796	9 954605	352	5
				4	10	404				
26	12	6	52				8 714419	9 954957	350	4
27	12	1	42	5	10	402	8 711037	9 955307	347	3
28	11	55	31	6	11	399	8 707654	9 955655	344	2
29	11	48	17	7	14	395	8 704277	9 955999	340	1
30	11	40	0	8	17	391	8 700910	9 956339		0
	Subtrahere.			Diff.		Diff.			Diff.	Gr.

Sig. IV. X.

TABULA EQUATIONUM APOGEI ET ECCENTRICITATUM ORBIS LUNÆ.

Sig. II. VIII.

Argu- ment. Ann.	Equ. Lunæ	Apog. Adde.	Diff.	Eccentric. Orbis Lu- næ ad Ra- dium 1.	Diff.	Logarithmi harum Eccentrici- tatum.	Logarithmi pro Equi- tione centri Lunæ.	Diff.	
Gr.	o.	1	11	1	11				
0	11	40	0			050224	8 700910	9 956339	30
			9 21						
1	11	30	39	10	25	049838	8 697559	9 956675	29
2	11	20	14	11	30	049457	8 694229	9 957007	28
3	11	8	44	12	36	049082	8 690927	9 957333	27
4	10	56	8	13	42	048714	8 687658	9 957653	26
5	10	42	26	14	48	048354	8 684430	9 957968	25
			15 53						
6	10	27	38	16	58	048001	8 681247	9 958275	24
7	10	11	45	18	3	047656	8 678118	9 958575	23
8	9	54	47	19	7	047321	8 675050	9 958867	22
9	9	36	44	20	12	046995	8 672049	9 959151	21
10	9	17	37	21	14	046679	8 669121	9 959426	20
			22 15						
11	8	57	25	23	14	046374	8 666277	9 959691	19
12	8	36	11	24	13	046081	8 663520	9 959946	18
13	8	13	56	25	8	045800	8 660861	9 960191	17
14	7	50	42	26	2	045531	8 658305	9 960425	16
15	7	26	29	27	41	045275	8 655859	9 960648	15
			28 27						
16	7	1	21	29	8	045033	8 653532	9 960858	14
17	6	35	19	30	22	044805	8 651331	9 961056	13
18	6	8	26	31	20	044592	8 649261	9 961242	12
19	5	40	45	32	14	044394	8 647329	9 961414	11
20	5	12	18	33	8	044212	8 645542	9 961573	10
			34 47						
21	4	43	10	35	2	044046	8 643906	9 961717	9
22	4	13	23	36	53	043896	8 642426	9 961848	8
23	3	43	1	37	14	043763	8 641108	9 961963	7
24	3	12	9	38	24	043647	8 639954	9 962064	6
25	2	40	49	39	28	043548	8 638973	9 962150	5
			40 49						
26	2	9	7	41	42	043467	8 638164	9 962221	4
27	1	37	6	42	1	043404	8 637532	9 962276	3
28	1	4	52	43	14	043359	8 637079	9 962315	2
29	0	32	28	44	24	043332	8 636806	9 962339	1
30	0	0	0	45	28	043323	8 636715	9 962347	0
			46 28						
	Subtrahe.		Diff.			Diff.		Diff.	Gr.

Sig. III. IX.

**TABULA PRO EXPEDIENDO CALCULO
EQUATIONIS CENTRI LUNÆ.**

Medii Lunæ loci ab Apogeo æquato distantia.

Sig. 0. Adde.						Sig. I. Adde.					
Log.	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962	
Gr.	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	
0	0 0	0 0	0 0	0 0	0 0	I 42	I 25	I 9	0 55	0 43	
1	0 4	0 3	0 3	0 2	0 2	I 44	I 27	I 11	0 57	0 44	
2	0 8	0 7	0 5	0 4	0 3	I 46	I 28	I 12	0 58	0 45	
3	0 12	0 10	0 8	0 6	0 5	I 48	I 30	I 14	0 59	0 46	
4	0 16	0 13	0 11	0 9	0 7	I 49	I 31	I 15	I 0	0 46	
5	0 20	0 16	0 13	0 11	0 8	I 51	I 33	I 16	I 1	0 47	
6	0 24	0 20	0 16	0 13	0 10	I 53	I 34	I 17	I 1	0 48	
7	0 28	0 23	0 19	0 15	0 12	I 54	I 35	I 18	I 2	0 48	
8	0 31	0 26	0 21	0 17	0 13	I 56	I 36	I 19	I 3	0 49	
9	0 35	0 29	0 24	0 19	0 15	I 57	I 37	I 20	I 4	0 49	
10	0 39	0 33	0 27	0 21	0 17	I 58	I 38	I 20	I 4	0 50	
11	0 43	0 36	0 29	0 23	0 18	I 59	I 39	I 21	I 5	0 50	
12	0 46	0 39	0 32	0 25	0 20	2 0	I 40	I 22	I 5	0 51	
13	0 50	0 42	0 34	0 28	0 21	2 0	I 40	I 22	I 5	0 51	
14	0 54	0 45	0 37	0 30	0 23	2 1	I 41	I 22	I 6	0 51	
15	0 57	0 48	0 39	0 32	0 24	2 1	I 41	I 23	I 6	0 51	
16	I 1	0 51	0 42	0 33	0 26	2 2	I 41	I 23	I 6	0 51	
17	I 4	0 54	0 44	0 35	0 27	2 2	I 41	I 23	I 6	0 51	
18	I 8	0 57	0 46	0 37	0 29	2 2	I 42	I 23	I 6	0 51	
19	I 11	0 59	0 48	0 39	0 30	2 2	I 41	I 23	I 6	0 51	
20	I 14	I 2	0 51	0 41	0 32	2 2	I 41	I 23	I 6	0 51	
21	I 18	I 4	0 53	0 42	0 33	2 1	I 41	I 22	I 5	0 50	
22	I 21	I 7	0 55	0 44	0 34	2 1	I 40	I 22	I 5	0 50	
23	I 24	I 9	0 57	0 46	0 36	2 0	I 40	I 21	I 4	0 50	
24	I 26	I 12	0 59	0 47	0 37	I 59	I 39	I 21	I 4	0 50	
25	I 29	I 14	I 1	0 49	0 38	I 58	I 38	I 20	I 3	0 49	
26	I 32	I 17	I 3	0 50	0 39	I 57	I 37	I 19	I 3	0 49	
27	I 34	I 19	I 4	0 52	0 40	I 56	I 36	I 19	I 2	0 48	
28	I 37	I 21	I 6	0 53	0 41	I 55	I 35	I 18	I 1	0 48	
29	I 39	I 23	I 7	0 54	0 42	I 54	I 34	I 17	I 1	0 47	
30	I 42	I 25	I 9	0 55	0 43	I 52	I 33	I 15	I 0	0 46	

**TABULA PRO EXPEDIENDO CALCULO
EQUATIONIS CENTRI LUNÆ.**

Medii Lunæ loci ab Apogæo equato distantia.

Sig. II. Adde.						Sig. III. Adde.					
Log	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962	
Gr.	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	
0	I 52-	I 33	I 15-	I 0	0 46-	0 20	0 15-	0 11-	0 8	0 6	
1	I 51	I 31-	I 14-	0 59	0 46	0 16	0 12	0 9	0 6	0 4-	
2	I 49	I 30	I 13	0 58	0 45	0 12	0 9	0 6	0 4	0 2-	
3	I 47	I 28-	I 11-	0 57	0 44	0 8	0 5-	0 3	0 2	0 1	
4	I 45	I 26-	I 10	0 56	0 43	0 4	0 2	0 0-	Sub. 0-	Sub. 1	
5	I 43	I 25	I 8-	0 54	0 42	Subtr.	Sub. 1	Sub. 2-	0 2-	0 3	
6	I 40-	I 23	I 7	0 53	0 41	0 4	0 4-	0 5	0 5	0 4-	
7	I 38-	I 21	I 5-	0 52	0 40	0 8	0 8	0 7-	0 7	0 6	
8	I 36	I 19	I 4	0 50	0 39	0 12	0 11	0 10	0 9	0 8	
9	I 33-	I 17	I 2	0 49	0 38	0 16	0 14-	0 13	0 11	0 10	
10	I 30-	I 14-	I 0	0 47-	0 36-	0 20	0 18	0 16	0 13-	0 11-	
11	I 28	I 12	0 58	0 46	0 35-	0 24	0 21-	0 18-	0 16	0 13-	
12	I 25	I 9-	0 56	0 44	0 34	0 27-	0 24-	0 21	0 18	0 14-	
13	I 22	I 7	0 54	0 42-	0 32-	0 31-	0 27-	0 24	0 20	0 16	
14	I 19	I 4-	0 52	0 41	0 31	0 35	0 31	0 26-	0 22	0 18	
15	I 16	I 2	0 50	0 39	0 30	0 39	0 34	0 29	0 24	0 19-	
16	I 12-	0 59	0 47-	0 37	0 28-	0 43	0 37	0 31-	0 26	0 21	
17	I 9	0 56	0 45	0 35	0 27	0 46-	0 40	0 34	0 28	0 22-	
18	I 5-	0 53-	0 43	0 33-	0 25-	0 50	0 43	0 36	0 30	0 24	
19	I 2	0 50-	0 40-	0 31-	0 24	0 53-	0 46	0 38-	0 32	0 25-	
20	0 58-	0 47-	0 38	0 29-	0 22	0 57	0 48-	0 41	0 33-	0 27	
21	0 55	0 44-	0 35-	0 27-	0 20-	I 0-	0 51	0 43	0 35-	0 28-	
22	0 51	0 41-	0 33	0 25-	0 19	I 3-	0 54	0 45-	0 37	0 29-	
23	0 47	0 38-	0 30-	0 23	0 17-	0 6-	0 56-	0 47-	0 39	0 31-	
24	0 44	0 35	0 28	0 21	0 16	I 9-	0 59	0 49-	0 40-	0 32	
25	0 40	0 32	0 25	0 19	0 14	I 12-	I 1-	0 51-	0 42	0 33	
26	0 36	0 28-	0 22-	0 17	0 12-	I 15-	I 4	0 53-	0 43-	0 34-	
27	0 32	0 25	0 20	0 15	0 11	I 18-	I 6-	0 55	0 45	0 36	
28	0 28	0 22	0 17	0 12-	0 9	I 21	I 9	0 57	0 46-	0 37	
29	0 24	0 19	0 14	0 10	0 7-	I 23-	I 11	0 59	0 48	0 38	
30	0 20	0 15-	0 11-	0 8	0 6	I 26	I 13	I 0-	0 49	0 39	

TABULA PRO EXPEDIENDO CALCULO
ÆQUATIONIS CENTRI LUNÆ.

Medii Lunæ loci ab Apogæo æquato distantia.

Sig. IV. Subtrabe.						Sig. V. Subtrabe.					
Log.	9 942	9 947	9 952	9 957	9 962	9 942	9 947	9 952	9 957	9 962	
Gr.	I II	I II	I II	I II	I II	I II	I II	I II	I II	I II	
0	I 26	I 13	I 0-	0 49	0 39	I 36-	I 21	I 6-	0 53	0 42	
1	I 29	I 15	I 2	0 50	0 40	I 35	I 19-	I 5-	0 52-	0 41	
2	I 30-	I 16-	I 3-	0 51	0 41	I 33	I 18	I 4	0 51-	0 40	
3	I 32-	I 18-	I 5	0 52	0 42	I 31	I 16	I 2-	0 50-	0 39	
4	I 34-	I 20	I 6	0 53-	0 42-	I 28-	I 14	I 1	0 49	0 38	
5	I 36-	I 21-	I 7	0 54-	0 43-	I 26-	I 12	0 59-	0 47-	0 37	
6	I 38	I 23	I 8-	0 55-	0 44	I 24	I 10	0 57-	0 46	0 36	
7	I 39-	I 24-	I 9-	0 56	0 44-	I 21-	I 8	0 56	0 44-	0 35	
8	I 41	I 25-	I 10-	0 57	0 45	I 18-	I 6	0 54	0 43	0 34	
9	I 42-	I 26-	I 11-	0 57-	0 45-	I 16	I 3-	0 52	0 41-	0 33	
10	I 44	I 27-	I 12	0 58	0 46	I 13	I 1	0 50	0 40	0 31-	
11	I 45	I 28-	I 13	0 58-	0 46	I 10	0 58-	0 48	0 38-	0 30-	
12	I 45-	I 29	I 13-	0 59	0 46-	I 7	0 56	0 46	0 37	0 29	
13	I 46	I 29-	I 13-	0 59-	0 46-	I 3-	0 53-	0 43-	0 35	0 27-	
14	I 47	I 30	I 14	I 0	0 47	I 0	0 50-	0 41-	0 33	0 26	
15	I 47	I 30	I 14-	I 0	0 47-	0 57	0 48	0 39-	0 31-	0 24-	
16	I 47-	I 30-	I 14-	I 0	0 47-	0 53-	0 45	0 37	0 29-	0 23	
17	I 48	I 30-	I 15	I 0	0 47-	0 50	0 42	0 34-	0 27-	0 21-	
18	I 48	I 30-	I 15	I 0	0 47-	0 46-	0 39	0 32	0 25-	0 20	
19	I 48	I 30-	I 15	I 0	0 47	0 43	0 36	0 29-	0 23-	0 18-	
20	I 47-	I 30	I 14-	I 0	0 47	0 39	0 33	0 27	0 21-	0 17	
21	I 47	I 30	I 14	0 59-	0 47	0 35-	0 29-	0 24	0 19-	0 15-	
22	I 46-	I 29-	I 13-	0 59	0 46-	0 31-	0 26-	0 21-	0 17	0 13-	
23	I 45-	I 29	I 13	0 58-	0 46	0 28	0 23	0 19	0 15	0 12	
24	I 44-	I 28	I 12-	0 58	0 45-	0 24	0 20	0 16	0 13	0 10	
25	I 43-	I 27	I 12	0 57-	0 45	0 20	0 16-	0 13-	0 11	0 8-	
26	I 42-	I 26	I 11	0 57	0 44-	0 16	0 13	0 11	0 9	0 7	
27	I 41	I 25	I 10	0 56-	0 44	0 12	0 10	0 8-	0 7	0 5-	
28	I 40	I 24	I 9	0 55-	0 43-	0 8	0 7	0 5-	0 4-	0 3-	
29	I 38-	I 22	I 8	0 54-	0 43	0 4	0 3-	0 3	0 2	0 2	
30	I 36-	I 21	I 6-	0 53-	0 42	0 0	0 0	0 0	0 0	0 0	

TABULA VARIATIONIS sive REFLECTIONIS.					LOGARITHMI PRO CORRECTIONE VARIATIONIS.				
Luna equata a Sole distantia.					Anomalia Media Solis.				
Sig.	o. VI. Adde.	I. VII. Adde.	II. VIII. Adde.		Gr.	Sig. o. Logar.	Sig. I. Logar.	Sig. II. Logar.	
Gr.	/ //	/ //	/ //						
0	0 0	30 27	30 27	30	0	0 0242	0 0211	0 0125	30
1	1 14	31 3	29 49	29	2	0 0242	0 0207	0 0118	28
2	2 27	31 36	29 9	28	4	0 0242	0 0203	0 0110	26
3	3 40	32 7	28 27	27	6	0 0241	0 0198	0 0102	24
4	4 54	32 36	27 43	26	8	0 0240	0 0193	0 0095	22
5	6 6	33 3	26 56	25	10	0 0239	0 0188	0 0087	20
6	7 19	33 27	26 8	24	12	0 0237	0 0182	0 0079	18
7	8 30	33 48	25 18	23	14	0 0235	0 0177	0 0071	16
8	9 41	34 7	24 26	22	16	0 0233	0 0171	0 0063	14
9	10 52	34 24	23 32	21	18	0 0231	0 0165	0 0055	12
10	12 2	34 38	22 36	20	20	0 0229	0 0159	0 0046	10
11	13 10	34 50	21 39	19	22	0 0226	0 0153	0 0038	8
12	14 18	34 59	20 40	18	24	0 0223	0 0146	0 0029	6
13	15 25	35 5	19 40	17	26	0 0219	0 0139	0 0021	4
14	16 30	35 9	18 38	16	28	0 0215	0 0132	0 0012	2
15	17 35	35 10	17 35	15	30	0 0211	0 0125	0 0004	0
16	18 38	35 9	16 30	14		Sig. XI.	Sig. X.	Sig. IX.	Gr.
17	19 40	35 5	15 25	13	Gr.	Sig. III.	Sig. IV.	Sig. V.	
18	20 40	34 59	14 18	12	0	0 0004	9 9880	9 9787	30
19	21 39	34 50	13 10	11	2	9 9995	9 9872	9 9783	28
20	22 36	34 38	12 2	10	4	9 9987	9 9865	9 9779	26
21	23 32	34 24	10 52	9	6	9 9978	9 9858	9 9775	24
22	24 26	34 7	9 41	8	8	9 9969	9 9851	9 9772	22
23	25 18	33 48	8 30	7	10	9 9961	9 9844	9 9769	20
24	26 8	33 27	7 19	6	12	9 9952	9 9837	9 9766	18
25	26 56	33 3	6 6	5	14	9 9944	9 9830	9 9763	16
26	27 43	32 36	4 54	4	16	9 9936	9 9824	9 9760	14
27	28 27	32 7	3 40	3	18	9 9928	9 9818	9 9758	12
28	29 9	31 36	2 27	2	20	9 9920	9 9812	9 9757	10
29	29 49	31 3	1 14	1	22	9 9912	9 9807	9 9755	8
30	30 27	30 27	0 0	0	24	9 9904	9 9802	9 9754	6
					26	9 9896	9 9797	9 9753	4
					28	9 9888	9 0792	9 9753	2
					30	9 9880	9 9787	9 9753	0
Sig.	V. XI. Subtr.	IV. X. Subtr.	III. IX. Subtr.	Gr.		Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA PRO COMPUTO LATITUDINIS LUNÆ.

Solis a Nodo medio distantia.

Sig. O. VI.					Sig. I. VII.					Sig. II. VIII.				
Gr.	Æquat. Nodi Adde.		Inclinat. Sinus Logarithmicus.	Reduct. Maxi.	Gr.	Æquat. Nodi Adde.		Inclinat. Sinus Logarithmicus.	Reduct. Maxi.	Gr.	Æquat. Nodi Adde.		Inclinat. Sinus Logarithmicus.	Reduct. Maxi.
	°	'				°	'				°	'		
0	0	0	8 96462	7 20	1	16	42	8 95853	7 8	1	18	44	8 94605	6 44 30
1	0	3	8 96461		1	18	16	8 95816	7 7	1	17	13	8 94567	6 43 29
2	0	6	8 96459		1	19	44	8 95777		1	15	29	8 94531	28
3	0	9	8 96456		1	21	6	8 95737	7 6	1	13	43	8 94495	6 42 27
4	0	12	8 96451		1	22	23	8 95698	7 5	1	11	53	8 94459	26
5	0	15	8 96444		1	23	34	8 95658	7 4	1	9	55	8 94425	6 41 25
6	0	18	8 96436		1	24	39	8 95617	7 3	1	7	52	8 94391	24
7	0	21	8 96426		1	25	38	8 95576	7 2	1	5	44	8 94359	6 40 23
8	0	24	8 96415	7 19	1	26	31	8 95534	7 1	1	3	32	8 94328	22
9	0	27	8 96403		1	27	17	8 95492	7 0	1	1	14	8 94298	6 39 21
10	0	29	8 96390		1	27	58	8 95450		0	58	51	8 94269	6 38 20
11	0	32	8 96375		1	28	32	8 95407	6 59	0	56	24	8 94241	6 37 19
12	0	35	8 96358	7 18	1	28	59	8 95363	6 58	0	53	53	8 94214	18
13	0	38	8 96340		1	29	21	8 95320	6 57	0	51	17	8 94188	6 36 17
14	0	41	8 96321	7 17	1	29	35	8 95277		0	48	38	8 94164	16
15	0	43	8 96300		1	29	43	8 95234	6 56	0	45	54	8 94141	6 35 15
16	0	46	8 96278		1	29	45	8 95190	6 55	0	43	7	8 94119	14
17	0	49	8 96255	7 16	1	29	40	8 95147	6 54	0	40	17	8 94099	13
18	0	51	8 96231		1	29	28	8 95104	6 53	0	37	24	8 94080	6 34 12
19	0	54	8 96205	7 15	1	29	10	8 95060		0	34	27	8 94062	11
20	0	56	8 96178		1	28	46	8 95017	6 52	0	31	28	8 94046	10
21	0	58	8 96150	7 14	1	28	14	8 94974	6 51	0	28	26	8 94032	9
22	1	1	8 96121		1	27	37	8 94931	6 50	0	25	22	8 94019	6 33 8
23	1	3	8 96091	7 13	1	26	52	8 94889	6 49	0	22	16	8 94008	7
24	1	5	8 96060	7 12	1	26	1	8 94847	6 48	0	19	9	8 93997	6
25	1	7	8 96028		1	25	4	8 94806		0	16	0	8 93988	5
26	1	9	8 95995	7 11	1	24	1	8 94764	6 47	0	12	49	8 93981	4
27	1	11	8 95960	7 10	1	22	51	8 94724	6 46	0	9	38	8 93976	3
28	1	13	8 95925		1	21	35	8 94684		0	6	26	8 93972	2
29	1	15	8 95889	7 9	1	20	12	8 94645	6 45	0	3	13	8 93970	1
30	1	16	8 95853	7 8	1	18	44	8 94605	6 44	0	0	0	8 93970	6 32 0
Subtrahere.					Subtrahere.					Subtrahere.				Gr.
Sig. V. XI.					Sig. IV. X.					Sig. III. IX.				

TABULA PARALLAXIUM LUNÆ
HORIZONTALIUM IN SYZYGIIIS.

Anom. Lunæ vera.		Eccentricitas Lunæ.						Anom. Lunæ vera.		Eccentricitas Lunæ.						Lunæ à Sole vel Op- posito distan.		Loga- rithmi Logist. adden- di.	
		,065 ,055 ,045								,065 ,055 ,045									
		Parallaxis Lunæ Horiz.								Parallaxis Lunæ Horiz.									
S	o	I	II	I	II	I	II	S	o	I	II	I	II	I	II	S	o	Log.	
o	o	53	34	54	4	54	35	3	o	57	16	57	12	57	9	o	o	o o	
o	3	53	34	54	4	54	35	3	3	57	28	57	22	57	17	o	3	o, 2	
o	6	53	35	54	5	54	35	3	6	57	40	57	32	57	25	o	6	o, 7	
o	9	53	36	54	6	54	36	3	9	57	51	57	42	57	33	o	9	1, 5	
o	12	53	38	54	8	54	38	3	12	58	3	57	52	57	41	o	12	2, 7	
o	15	53	41	54	10	54	40	3	15	58	14	58	1	57	49	o	15	4, 2	
o	18	53	44	54	13	54	42	3	18	58	25	58	11	57	57	o	18	6, o	
o	21	53	48	54	16	54	45	3	21	58	36	58	20	58	4	o	21	8, 1	
o	24	53	52	54	20	54	48	3	24	58	47	58	29	58	12	o	24	10, 4	
o	27	53	57	54	24	54	51	3	27	58	58	58	38	58	19	o	27	13, o	
I	o	54	3	54	29	54	55	4	o	59	8	58	47	58	26	I	o	15, 7	
I	3	54	9	54	34	54	59	4	3	59	18	58	55	58	33	I	3	18, 6	
I	6	54	16	54	40	55	4	4	6	59	28	59	3	58	40	I	6	21, 7	
I	9	54	23	54	46	55	9	4	9	59	37	59	11	58	46	I	9	24, 7	
I	12	54	30	54	52	55	14	4	12	59	46	59	19	58	52	I	12	28, 1	
I	15	54	38	54	59	55	20	4	15	59	54	59	26	58	58	I	15	31, 4	
I	18	54	47	55	6	55	26	4	18	60	2	59	33	59	3	I	18	34, 6	
I	21	54	56	55	13	55	32	4	21	60	10	59	39	59	9	I	21	37, 8	
I	24	55	5	55	21	55	38	4	24	60	17	59	45	59	14	I	24	41, o	
I	27	55	15	55	30	55	45	4	27	60	24	59	51	59	18	I	27	44, 1	
2	o	55	25	55	38	55	52	5	o	60	30	59	56	59	23	2	o	47, o	
2	3	55	35	55	47	55	59	5	3	60	35	60	1	59	26	2	3	49, 7	
2	6	55	46	55	56	56	6	5	6	60	40	60	5	59	30	2	6	52, 2	
2	9	55	56	56	5	56	14	5	9	60	45	60	9	59	33	2	9	54, 5	
2	12	56	7	56	14	56	21	5	12	60	49	60	12	59	36	2	12	56, 6	
2	15	56	19	56	23	56	29	5	15	60	52	60	15	59	38	2	15	58, 3	
2	18	56	30	56	33	56	37	5	18	60	55	60	17	59	40	2	18	59, 8	
2	21	56	41	56	43	56	45	5	21	60	57	60	19	59	41	2	21	61, o	
2	24	56	53	56	53	56	53	5	24	60	59	60	20	59	42	2	24	61, 8	
2	27	57	5	57	3	57	1	5	27	61	o	60	21	59	43	2	27	62, 3	
3	o	57	16	57	12	57	9	6	o	61	o	60	21	59	43	3	o	62, 5	

TABULA ÆQUATIONUM LUNÆ IN SYZYGIIIS.

Argumentum Annuum.

Sol ab Apog. Lunæ Gr.	Sig. o. Subtr.	Sig. I. Subtr.	Sig. II. Subtr.	Sig. III. Subtr.	Sig. IV. Subtr.	Sig. V. Subtr.	
0	0 0 0	2 38 53	4 27 45	4 57 46	4 8 20	2 19 27	30
1	0 5 36	2 43 33	4 30 6	4 57 20	4 5 31	2 15 7	29
2	0 11 12	2 48 9	4 32 21	4 56 49	4 2 38	2 10 45	28
3	0 16 47	2 52 42	4 34 31	4 56 12	3 59 41	2 6 22	27
4	0 22 23	2 57 11	4 36 35	4 55 29	3 56 39	2 1 57	26
5	0 27 58	3 1 37	4 38 34	4 54 42	3 53 35	1 57 31	25
6	0 33 33	3 5 59	4 40 27	4 53 50	3 50 28	1 53 2	24
7	0 39 6	3 10 16	4 42 15	4 52 52	3 47 16	1 48 31	23
8	0 44 38	3 14 30	4 43 58	4 51 48	3 44 1	1 43 59	22
9	0 50 9	3 18 40	4 45 35	4 50 40	3 40 42	1 39 26	21
10	0 55 40	3 22 45	4 47 5	4 49 26	3 37 18	1 34 52	20
11	1 1 9	3 26 45	4 48 30	4 48 7	3 33 52	1 30 16	19
12	1 6 37	3 30 41	4 49 50	4 46 44	3 30 22	1 25 38	18
13	1 12 4	3 34 33	4 51 5	4 45 16	3 26 49	1 20 58	17
14	1 17 30	3 38 20	4 52 13	4 43 42	3 23 14	1 16 18	16
15	1 22 53	3 42 2	4 53 15	4 42 4	3 19 36	1 11 37	15
16	1 28 13	3 45 40	4 54 13	4 40 21	3 15 54	1 6 55	14
17	1 33 31	3 49 14	4 55 5	4 38 33	3 12 10	1 2 13	13
18	1 38 48	3 52 43	4 55 51	4 36 41	3 8 22	0 57 30	12
19	1 44 3	3 56 6	4 56 32	4 34 44	3 4 31	0 52 45	11
20	1 49 16	3 59 24	4 57 7	4 32 42	3 0 38	0 48 0	10
21	1 54 27	4 2 37	4 57 36	4 30 35	2 56 42	0 43 14	9
22	1 59 36	4 5 46	4 57 59	4 28 24	2 52 44	0 38 28	8
23	2 4 41	4 8 49	4 58 16	4 26 9	2 48 43	0 33 41	7
24	2 9 43	4 11 47	4 58 29	4 23 50	2 44 39	0 28 52	6
25	2 14 43	4 14 40	4 58 35	4 21 25	2 40 32	0 24 4	5
26	2 19 41	4 17 27	4 58 36	4 18 56	2 36 24	0 19 16	4
27	2 24 35	4 20 8	4 58 31	4 16 23	2 32 14	0 14 27	3
28	2 29 24	4 22 46	4 58 22	4 13 46	2 28 1	0 9 38	2
29	2 34 10	4 25 19	4 58 7	4 11 5	2 23 45	0 4 49	1
30	2 38 53	4 27 45	4 57 46	4 8 20	2 19 27	0 0 0	0
	Sig. XI. Adde.	Sig. X. Adde.	Sig. IX. Adde.	Sig. VIII. Adde.	Sig. VII. Adde.	Sig. VI. Adde.	Gr.

TABULA LATITUDINARIA LUNÆ IN SYZYGIIIS.

Solis a Nodo medio distantia.

Argument. Latitudinis.	Sig. o. Bor.			Subtr.		Inclinatio vix Lunæ ad Eclipticam.			Sig. 1. Bor.			Subtr.		Sig. 2. Bor.			Subtr.		Gr.			
	Sig. 6. Aufst.			Subtr.					Sig. 7. Aufst.			Subtr.		Sig. 8. Aufst.			Subtr.					
	Latitudo.			Reduct.					Latitudo.			Reduct.		Latitudo.			Reduct.					
Gr.	o	1	11	1	11	o	1	11	o	1	11	1	11	o	1	11	1	11				
0	0	0	0	0	0	5	17	20	2	30	12	6	1	4	19	39	5	59	30			
1	0	5	15	0	14	5	17	17	2	34	42	6	8	4	22	13	5	51	29			
2	0	10	30	0	29	5	17	8	2	39	9	6	14	4	24	42	5	43	28			
3	0	15	44	0	43	5	16	54	2	43	34	6	20	4	27	6	5	35	27			
4	0	20	59	0	58	5	16	33	2	47	56	6	26	4	29	25	5	26	26			
5	0	26	13	1	12	5	16	6	2	52	15	6	31	4	31	40	5	17	25			
6	0	31	26	1	26	5	15	33	2	56	30	6	36	4	33	49	5	8	24			
7	0	36	39	1	41	5	14	55	3	0	42	6	40	4	35	53	4	58	23			
8	0	41	51	1	55	5	14	11	3	4	51	6	43	4	37	52	4	48	22			
9	0	47	2	2	9	5	13	22	3	8	56	6	46	4	39	47	4	37	21			
10	0	52	13	2	22	5	12	27	3	12	58	6	49	4	41	37	4	26	20			
11	0	57	23	2	36	5	11	26	3	16	56	6	52	4	43	21	4	15	19			
12	1	2	31	2	49	5	10	19	3	20	51	6	54	4	45	0	4	3	18			
13	1	7	38	3	3	5	9	6	3	24	42	6	55	4	46	34	3	51	17			
14	1	12	44	3	16	5	7	47	3	28	29	6	56	4	48	3	3	39	16			
15	1	17	49	3	29	5	6	22	3	32	12	6	56	4	49	26	3	27	15			
16	1	22	52	3	41	5	4	52	3	35	51	6	55	4	50	44	3	14	14			
17	1	27	54	3	53	5	3	16	3	39	26	6	54	4	51	57	3	1	13			
18	1	32	54	4	5	5	1	35	3	42	57	6	53	4	53	4	2	48	12			
19	1	37	52	4	17	4	59	49	3	46	24	6	51	4	54	6	2	35	11			
20	1	42	49	4	28	4	57	56	3	49	48	6	49	4	55	3	2	21	10			
21	1	47	44	4	39	4	55	58	3	53	7	6	46	4	55	55	2	8	9			
22	1	52	37	4	50	4	53	55	3	56	22	6	43	4	56	42	1	54	8			
23	1	57	27	5	0	4	51	47	3	59	33	6	39	4	57	23	1	40	7			
24	2	2	15	5	10	4	49	33	4	2	39	6	35	4	57	58	1	26	6			
25	2	7	00	5	20	4	47	14	4	5	40	6	30	4	58	27	1	12	5			
26	2	11	43	5	29	4	44	50	4	8	36	6	25	4	58	51	0	58	4			
27	2	16	24	5	38	4	42	20	4	11	28	6	19	4	59	10	0	43	3			
28	2	21	2	5	46	4	39	45	4	14	16	6	13	4	59	24	0	29	2			
29	2	25	38	5	54	4	37	5	4	17	0	6	6	4	59	32	0	14	1			
30	2	30	12	6	1	4	34	19	4	19	39	5	59	4	59	35	0	0	0			
Sig. 11. Aufst.				Adde.						Sig. 10. Aufst.				Adde.		Sig. 9. Aufst.				Adde.		
Sig. 5. Bor.				Adde.						Sig. 4. Bor.				Adde.		Sig. 3. Bor.				Adde.		

**TABULA MOTUUM HORARIORUM, DIAMETRORUM
ET PARALAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS.**

<i>Anom. med. Solis.</i>	<i>☉ Mot. H. ver.</i>	<i>Diam. Solis.</i>	<i>Anom. med. Solis.</i>	<i>Argum. Ann.</i>	<i>☉ Mot. Hor. ver.</i>	<i>☉ Diam. Horiz.</i>	<i>☉ Paral. Horiz.</i>	<i>Argum. Ann.</i>	<i>Dist. ☉ ☉ paral. vert.</i>	<i>Pa- ral. ☉</i>	<i>Aug. Dia^m Lunæ</i>	<i>Apog.</i>	<i>Perig.</i>
<i>s o</i>	<i>I II</i>	<i>I II</i>	<i>s o</i>	<i>s o</i>	<i>I II</i>	<i>I II</i>	<i>I II</i>	<i>s o</i>	<i>Gr.</i>	<i>II</i>	<i>II</i>	<i>II</i>	<i>II</i>
O o	2 23	31 38	oXII	O. o	29 33	29 25	53 28	oXII	o	o	29	36	
5	2 23	31 38	25	5	29 34	29 25	53 29	25	3	1	28	36	
10	2 23	31 38	20	10	29 36	29 26	53 31	20	6	1	28	36	
15	2 23	31 39	15	15	29 39	29 28	53 35	15	9	2	28	36	
20	2 23	31 40	10	20	29 45	29 30	53 41	10	12	3	27	35	
25	2 23	31 41	5	25	29 53	29 34	53 48	5	15	3	27	35	
I. o	2 24	31 42	oXI	I. o	30 1	29 40	53 57	oXI.	18	4	27	34	
5	2 24	31 43	25	5	30 11	29 46	54 7	25	21	4	26	34	
10	2 24	31 45	20	10	30 22	29 51	54 18	20	24	5	26	33	
15	2 24	31 47	15	15	30 36	29 58	54 32	15	27	6	25	32	
20	2 25	31 49	10	20	30 50	30 5	54 45	10	30	6	24	31	
25	2 25	31 51	5	25	31 6	30 14	55 0	5	33	7	23	30	
II. o	2 25	31 53	oX.	II. o	31 23	30 23	55 16	oX.	36	7	23	29	
5	2 26	31 56	25	5	31 42	30 32	55 33	25	39	8	22	28	
10	2 26	31 59	20	10	32 1	30 42	55 51	20	42	8	21	27	
15	2 26	32 1	15	15	32 23	30 52	56 10	15	45	9	20	25	
20	2 27	32 4	10	20	32 45	31 3	56 30	10	48	9	19	24	
25	2 27	32 7	5	25	33 8	31 14	56 49	5	51	9	18	23	
III. o	2 28	32 10	oIX	III. o	33 32	31 25	57 9	oIX	54	10	16	21	
5	2 28	32 13	25	5	33 56	31 36	57 29	25	56	10	16	20	
10	2 28	32 15	20	10	34 21	31 47	57 49	20	58	10	15	19	
15	2 29	32 18	15	15	34 45	31 58	58 9	15	60	10	14	18	
20	2 29	32 21	10	20	35 8	32 9	58 28	10	62	11	13	17	
25	2 30	32 23	5	25	35 31	32 20	58 47	5	64	11	12	16	
IV. o	2 30	32 26	oVIII	IV. o	35 54	32 30	59 5	oVIII	66	11	11	15	
5	2 31	32 29	25	5	36 14	32 39	59 23	25	68	11	10	13	
10	2 31	32 31	20	10	36 34	32 48	59 40	20	70	11	10	12	
15	2 31	32 33	15	15	36 53	32 57	59 55	15	72	11	9	11	
20	2 32	32 35	10	20	37 10	33 5	60 10	10	74	12	8	10	
25	2 32	32 37	5	25	37 24	33 12	60 23	5	76	12	7	9	
V. o	2 32	32 39	oVII	V. o	37 39	33 18	60 34	oVII	78	12	6	7	
5	2 32	32 40	25	5	37 50	33 24	60 44	25	80	12	5	6	
10	2 33	32 41	20	10	38 0	33 28	60 52	20	82	12	4	5	
15	2 33	32 42	15	15	38 6	33 31	60 58	15	84	12	3	4	
20	2 33	32 43	10	20	38 14	33 34	61 3	10	86	12	2	2	
25	2 33	32 43	5	25	38 17	33 36	61 6	5	88	12	1	1	
VI. o	2 33	32 43	oVI	VI. o	38 18	33 36	61 7	oVI,	90	12	0	0	

*In Oppositionibus addantur
VI Signa Argumento Annuo.*

*TABULA REFRACTIONUM
SECUNDUM DISTANTIAS
à VERTICE.*

<i>Dist. App. à Vertice</i>			<i>Refrac- tio.</i>			<i>Dist. App. à Vertice</i>			<i>Refrac- tio.</i>			<i>Dist. App. à Vertice</i>			<i>Refrac- tio.</i>		
<i>Gr.</i>	<i>'</i>	<i>"</i>				<i>Gr.</i>	<i>'</i>	<i>"</i>				<i>Gr. m.</i>	<i>'</i>	<i>"</i>			
0	0	0				35	0	38				70	0	2	26		
1	0	1				36	0	39				71	0	2	34		
2	0	2				37	0	40				72	0	2	43		
3	0	3				38	0	42				73	0	2	53		
4	0	4				39	0	44				74	0	3	4		
5	0	5				40	0	45				75	0	3	17		
6	0	6				41	0	47				76	0	3	31		
7	0	7				42	0	48				77	0	3	47		
8	0	8				43	0	50				78	0	4	5		
9	0	9				44	0	52				79	0	4	27		
10	0	10				45	0	54				80	0	4	52		
11	0	11				46	0	56				80	30	5	6		
12	0	12				47	0	58				81	0	5	22		
13	0	13				48	1	0				81	30	5	40		
14	0	14				49	1	2				82	0	6	0		
15	0	15				50	1	4				82	30	6	22		
16	0	16				51	1	6				83	0	6	47		
17	0	17				52	1	8				83	30	7	14		
18	0	18				53	1	11				84	0	7	45		
19	0	19				54	1	13				84	30	8	21		
20	0	20				55	1	16				85	0	9	2		
21	0	21				56	1	19				85	30	9	50		
22	0	22				57	1	22				86	0	10	48		
23	0	23				58	1	25				86	30	11	57		
24	0	24				59	1	28				87	0	13	20		
25	0	25				60	1	32				87	30	15	2		
26	0	26				61	1	36				88	0	17	8		
27	0	27				62	1	40				88	15	18	22		
28	0	28				63	1	44				88	30	19	46		
29	0	30				64	1	49				88	45	21	20		
30	0	31				65	1	54				89	0	23	7		
31	0	32				66	1	59				89	15	25	11		
32	0	34				67	2	5				89	30	27	35		
33	0	35				68	2	11				89	45	30	24		
34	0	36				69	2	18				90	0	33	45		

**TABULA MOTUUM HORARIORUM, DIAMETRORUM
ET PARALLAXIUM SOLIS ET LUNÆ, IN ECLIPSIBUS**

Anom. med. Solis.	Hor. ☉ ver.	Diam. Solis.	Anom. med. Solis.	Argum. Ann.	☾ Mot. Hor. Ver.	☾ Diam. Horiz.	☾ Parall. Horiz.	Argum. Ann.	Alt. ☉ ☽	Paral. lax. ☉	Aug. Diam. Lunæ Apog Perig.
S 0	/ //	/ //	0 S	S 0	/ //	/ //	/ //	0 S	0	//	// //
O. 0	2 23	31 38	0 XII.	O. 0	29 33	29 25	53 28	0 XII.	0	12	0 0
5	2 23	31 38	25	5	29 34	29 25	53 29	25	2	12	1 1
10	2 23	31 38	20	10	29 36	29 26	53 31	20	4	12	2 2
15	2 23	31 39	15	15	29 39	29 28	53 35	15	6	12	3 4
20	2 23	31 40	10	20	29 45	29 30	53 41	10	8	12	4 5
25	2 23	31 41	5	25	29 53	29 34	53 48	5	10	12	5 6
I. 0	2 24	31 42	0 XI.	I. 0	30 1	29 40	53 57	0 XI.	12	12	6 7
5	2 24	31 43	25	5	30 11	29 46	54 7	25	14	12	7 9
10	2 24	31 45	20	10	30 22	29 51	54 18	20	16	12	8 10
15	2 24	31 47	15	15	30 36	29 58	54 32	15	18	12	9 11
20	2 25	31 49	10	20	30 50	30 5	54 45	10	20	12	10 12
25	2 25	31 51	5	25	31 6	30 14	55 0	5	22	12	10 13
II. 0	2 25	31 53	0 X.	II. 0	31 23	30 23	55 16	0 X.	24	11	11 15
5	2 26	31 56	25	5	31 42	30 32	55 33	25	26	11	12 16
10	2 26	31 59	20	10	32 1	30 42	55 51	20	28	11	13 17
15	2 26	32 1	15	15	32 23	30 52	56 10	15	30	11	14 18
20	2 27	32 4	10	20	32 45	31 3	56 30	10	32	10	15 19
25	2 27	32 7	5	25	33 8	31 14	56 49	5	34	10	16 20
III. 0	2 28	32 10	0 IX.	III. 0	33 32	31 25	57 9	0 IX.	36	10	16 21
5	2 28	32 13	25	5	33 56	31 36	57 29	25	39	10	18 23
10	2 28	32 15	20	10	34 21	31 47	57 49	20	42	9	19 24
15	2 29	32 18	15	15	34 45	31 58	58 9	15	45	9	20 25
20	2 29	32 21	10	20	35 8	32 9	58 28	10	48	8	21 27
25	2 30	32 23	5	25	35 31	32 20	58 47	5	51	8	22 28
IV. 0	2 30	32 26	0 VIII.	IV. 0	35 54	32 30	59 5	0 VIII.	54	7	23 29
5	2 31	32 29	25	5	36 14	32 39	59 23	25	57	7	23 30
10	2 31	32 31	20	10	36 34	32 48	59 40	20	60	6	24 31
15	2 31	32 33	15	15	36 53	32 57	59 55	15	63	6	25 32
20	2 32	32 35	10	20	37 10	33 5	60 10	10	66	5	26 33
25	2 32	32 37	5	25	37 24	33 12	60 23	5	69	4	26 34
V. 0	2 32	32 39	0 VII.	V. 0	37 39	33 18	60 34	0 VII.	72	4	27 34
5	2 32	32 40	25	5	37 50	33 24	60 44	25	75	3	27 35
10	2 33	32 41	20	10	38 7	33 28	60 52	20	78	3	27 35
15	2 33	32 42	15	15	38 16	33 31	60 58	15	81	2	28 36
20	2 33	32 43	10	20	38 14	33 34	61 3	10	84	1	28 36
25	2 33	32 43	5	25	38 17	33 36	61 6	5	87	1	28 36
VI. 0	2 33	32 43	0 VI.	VI. 0	38 18	33 36	61 7	0 VI.	90	0	29 36

**ECLIPSIUM SOLARIUM PERIODUS PLINIANA
CURRENTIS SECVLI XIX^{vi} PRIMA.**

Anno Chri- sti Juli.	Med. Eclipsis Solis Temp. Aequat. Londini.			Anomalia media Solis.			Argumentum Annuum.			Lat. Lu- nae à Sole.		Plaga Lunæ.	
	D.	H.	'	S.	o.	'	S.	o.	'	"	"		
1701	Jan.	27	11	6	7	10	8	11	7	27	35	20	Bor. asc.
	Jul.	23	21	30	1	5	1	4	10	37	26	22	Aust. desc.
1702	Jan.	16	13	42	6	29	9	9	16	47	3	35	Aust. asc.
	Jul.	13	9	39	0	24	25	2	20	47	18	14	Bor. desc.
1703	Jan.	5	23	27	6	18	27	7	26	20	43	50	Aust. asc.
	Jul.	2	14	36½	0	13	32	1	0	44	61	0	Bor. desc.
	Nov.	27	3	44	5	8	57	5	9	30	79	13	Bor. asc.
	Dec.	26	14	15	6	7	58	6	6	3	84	20	Aust. asc.
1704	Maii	22	1	7	11	3	18	10	15	27	51	33	Aust. desc.
	Nov.	15	17	38	4	28	25	3	19	13	38	37	Bor. asc.
1705	Maii	11	7	55	10	22	28	8	25	26	8	26	Aust. desc.
	Nov.	5	1	20	4	17	38	1	28	45	1	29	Aust. asc.
1706	Apr.	30	21	34	10	11	56	7	5	37½	36	12	Bor. desc.
	Octob.	25	2	19	4	6	35	0	8	3	40	21	Aust. asc.
1707	Apr.	20	14	19	10	1	32	5	16	27	80	24	Bor. desc.
	Sept.	14	11	4	2	26	17	9	20	40	81	33	Bor. asc.
	Octob.	14	2	16	3	25	30	10	17	23	78	36	Aust. asc.
1708	Mart.	10	18	53	8	22	2	3	0	27	33	21	Aust. desc.
	Sept.	2	21	0	2	15	35	8	1	14	39	43	Bor. asc.
1709	Feb.	28	0	17	8	11	10	1	10	2	7	26	Bor. desc.
	Aug.	23	12	36	2	5	8	6	11	23	4	30	Aust. asc.
1710	Feb.	17	0	14	8	0	4	11	19	24	46	31	Bor. desc.
	Aug.	13	5	16	1	24	43	4	21	37	49	15	Aust. asc.
1711	Feb.	6	1	38	7	19	1	9	28	45	84	45	Bor. desc.
	Julii	4	7	20	0	15	7	2	6	42	61	10	Bor. asc.
	Dec.	27	22	1	6	9	11½	7	11	46	38	58	Aust. desc.
1712	Jun.	22	10	34½	0	4	10	0	16	36	18	43	Bor. asc.
	Dec.	16	13	27	5	28	44	5	21	31	2	35	Bor. desc.
1713	Jun.	11	11	18	11	23	6	10	26	24	23	40	Aust. asc.
	Dec.	6	4	2	5	18	14	4	1	14	43	49	Bor. desc.
1714	Maii	31	16	44	11	12	13	9	6	23	66	25	Aust. asc.
	Nov.	25	13	28	5	7	31	2	10	46	83	8	Bor. desc.
1715	Apr.	21	21	35½	10	2	44	6	21	33	43	25	Bor. asc.
	Octob.	15	20	55	3	27	10	11	23	28	42	37	Aust. desc.
1716	Apr.	10	14	27	9	22	20	5	1	46	1	19	Aust. asc.
	Octob.	3	22	6	3	16	7	10	2	53½	3	2	Aust. desc.
1717	Mart.	31	4	35	9	11	49	3	11	51½	45	5	Aust. asc.
	Sept.	23	6	21	3	5	21	8	12	37	38	30	Bor. desc.
1718	Feb.	18	19	30	8	1	46	0	25	31	74	30	Bor. asc.
	Mart.	20	12	5	9	1	1½	1	21	39	86	7	Aust. asc.
	Sept.	12	20	38	2	24	50	6	22	38	81	0	Bor. desc.

**ECLIPSIUM LUNARIUM PERIODUS PLINIANA,
CURRENTIS SECVLI XIX^{vi} PRIMA.**

Anno Chri- sti Jul.	Med. Eclipsis Lune Temp. Æquat. Londini.			Anomalia media Solis.			Argumentum Annuum.			Lat. Lu- nae à Sole.		Plaga Lune.
	D.	H.		S.	o.		S.	o.		'	"	
1701	Feb.	11	11	29	7	24	56	11	20	51	$\frac{1}{2}$	Bor. desc.
	Aug.	7	1	32	1	18	59	4	22	42		Aust. asc.
1702	Dec.	22	18	59	6	4	28	7	13	32		Aust. desc.
1703	Jun.	17	13	10	11	28	41	0	17	58		Bor. asc.
	Dec.	11	18	30	5	23	21	5	22	41		Bor. desc.
1704	Jun.	6	6	24	11	18	17	10	28	22		Aust. asc.
	Nov.	29	19	10	5	12	17	4	1	53		Bor. desc.
1706	Apr.	16	13	33	9	27	49	6	23	19		Bor. asc.
	Octob.	10	6	56	3	21	59	11	24	55		Aust. desc.
1707	Apr.	5	13	$38\frac{1}{2}$	9	16	43	5	2	56		Aust. asc.
	Sept.	29	22	25	3	11	32	10	4	53		Bor. desc.
1708	Mart.	24	17	38	9	5	47	3	12	37		Aust. asc.
	Sept.	18	8	59	3	0	52	8	14	43		Bor. desc.
1710	Feb.	2	10	$49\frac{1}{2}$	7	15	43	11	6	$25\frac{1}{2}$		Bor. asc.
	Jul.	28	22	0	1	9	38	4	8	$31\frac{1}{2}$		Aust. desc.
1711	Jan.	23	0	$32\frac{1}{2}$	7	5	11	9	16	11		Aust. asc.
	Jul.	18	5	52	0	28	52	2	18	32		Bor. desc.
1712	Jan.	12	7	47	6	24	23	7	25	40		Aust. asc.
	Jul.	6	20	$19\frac{1}{2}$	0	18	$21\frac{1}{2}$	0	28	49		Bor. desc.
1713	Maii	28	6	30	11	9	6	10	14	22		Aust. desc.
	Nov.	20	15	16	5	2	$55\frac{1}{2}$	3	17	15		Bor. asc.
1714	Maii	17	19	5	10	28	31	8	24	34		Aust. desc.
	Nov.	10	1	4	4	22	14	1	26	$49\frac{1}{2}$		Bor. asc.
1715	Maii	7	0	31	10	17	$38\frac{1}{2}$	7	4	29		Bor. desc.
	Octob.	30	16	0	4	11	45	0	6	38		Aust. asc.
1717	Mart.	15	15	15	8	26	29	2	28	18		Aust. desc.
	Sept.	9	5	56	2	21	32	8	0	23		Bor. asc.
1718	Mart.	5	3	58	8	15	55	1	8	12		Bor. desc.
	Aug.	29	7	52	2	10	31	6	10	1		Aust. asc.

In hac itaq; Eclipsium Periodo habentur XXIX Eclipses Lunares & XLI Solares, aliasq; quinq; quas, ne inutiliter ultra terminos Paginæ nostræ excresceret earum Catalogus, consulto omisimus. Quatuor autem obtin-
gunt in extremis tantum partibus Terræ, juxta Polum Austrinum, ac ubi
maximæ non nisi ad paucos Digitos assurgunt, atq; insuper post aliquot
Periodos, descendente Luna in Austrum, Penumbra ejus Terræ discum
deferet. Fiunt vero in Noviluniis Martii 1707, Januarii 1711, Octobris
1714, & Augusti 1718. Quinta Maii 2^{do} 1714, unius tantum erat Digiti
prope Polum Boreum, ita ut Novilunium Maii 1732 non erit Eclipticum.

TABULA ÆQUATIONIS INTERVALLI ECLIPSIVM
POST PERIODVM PLINIANAM.

Anom. med. Solis.	Minut. Temp. Subtr.		Diff. Lat.	Anom. med. Solis.	Minut. Temp. Adde.		Diff. Lat.	Argu- ment. Ann.	Minut. Temp. Subtr.		Argu- ment. Ann.	Minut. Temp. Adde.	
S. o	I	II	I II	S. o	I	II	I II	S. o	I	II	S. o	I	II
O o	45	2	4 27	VI. o	46	54	0 23	O. o	29	7	VI. o	25	5
5	44	30	4 26	5	46	19	0 24	5	29	5	5	25	3
10	43	44	4 24	10	45	22	0 26	10	28	44	10	24	50
15	42	36	4 21	15	44	2	0 29	15	28	12	15	24	30
20	41	9	4 16	20	42	27	0 34	20	27	18	20	24	7
25	39	25	4 11	25	40	26	0 39	25	26	12	25	23	30
I. o	37	23	4 6	VII. o	37	59	0 46	I. o	24	47	VII. o	22	41
5	35	4	4 0	5	35	22	0 53	5	23	19	5	21	42
10	32	30	3 53	10	32	28	1 0	10	21	38	10	20	38
15	29	41	3 45	15	29	18	1 8	15	19	40	15	19	27
20	26	37	3 37	20	25	55	1 17	20	17	36	20	18	10
25	23	21	3 28	25	22	24	1 26	25	15	25	25	16	35
II. o	19	55	3 19	VIII. o	18	40	1 36	II. o	13	11	VIII. o	15	0
5	16	20	3 9	5	14	50	1 46	5	10	48	5	13	15
10	12	32	2 59	10	10	53	1 57	10	8	21	10	11	21
15	8	43	2 49	15	6	55	2 7	15	5	53	15	9	19
20	4	48	2 38	20	+ 2	51	2 18	20	3	25	20	7	12
25	—	0	2 28	25	—	1	2 29	25	—	1	25	5	0
III. o	+ 3	18	2 17	IX. o	5	13	2 40	III. o	+ 1	20	IX. o	2	42
5	7	19	2 7	5	9	7	2 50	5	3	42	5	+ 0	22
10	11	20	1 56	10	12	58	3 0	10	5	59	10	— 2	0
15	15	13	1 46	15	16	42	3 10	15	8	6	15	4	31
20	19	4	1 36	20	20	18	3 20	20	10	10	20	6	57
25	22	46	1 26	25	23	46	3 29	25	12	8	25	9	23
IV. o	26	17	1 16	X. o	26	58	3 38	IV. o	13	59	X. o	11	45
5	29	39	1 7	5	29	57	3 46	5	15	44	5	14	4
10	32	47	0 59	10	32	48	3 54	10	17	18	10	16	22
15	35	39	0 52	15	35	21	4 0	15	18	40	15	18	33
20	38	18	0 45	20	37	38	4 6	20	20	0	20	20	30
25	40	40	0 39	25	39	35	4 12	25	21	10	25	22	21
V. o	42	37	0 34	XI. o	41	17	4 17	V. o	22	11	XI. o	23	59
5	44	11	0 30	5	42	42	4 21	5	22	57	5	25	29
10	45	30	0 26	10	43	50	4 24	10	23	41	10	26	45
15	46	25	0 24	15	44	35	4 26	15	24	19	15	27	36
20	46	58	0 23	20	45	2	4 27	20	24	39	20	28	27
25	47	7	0 23	25	45	13	4 28	25	24	59	25	28	54
VI. o	+46	54	0 23	XII. o	—45	2	4 27	VI. o	+25	5	XII. o	—29	7

EPOCHÆ MEDIORUM MOTUUM MERCURII.

Annis Julianis ineun- tibus.	Mercurius ab Æquinoct.				Aph. & 12°		Nod. & 14°		Annis Julianis ineun- tibus.	Mercurius ab Æquinoct.				Aphel. & 12°		Nod. & 14°	
	s	o	i	II	i	II	i	II		s	o	i	II	o	i	II	o
1661	3	17	18	47	9	15	14	50	1696	7	10	9	17	39	54	44	0
62	5	11	1	49	10	7	15	40	97	9	7	57	51	40	47	44	50
63	7	4	44	51	11	0	16	30	98	11	1	40	53	41	40	45	40
64	8	28	27	53	11	52	17	20	99	0	25	23	55	42	32	46	30
1665	10	26	16	27	12	45	18	10	1700	2	19	6	57	43	25	47	20
1666	0	19	59	29	13	37	19	0	1701	4	16	55	32	44	18	48	10
67	2	13	42	31	14	30	19	50	2	6	10	38	34	45	10	49	0
68	4	7	25	33	15	22	20	40	3	8	4	21	36	46	3	49	50
69	6	5	14	8	16	15	21	30	4	9	28	4	38	46	55	50	40
1670	7	28	57	10	17	8	22	20	1705	11	25	53	12	47	48	51	30
1671	9	22	40	12	18	0	23	10	1706	1	19	36	14	48	40	52	20
72	11	16	23	14	18	53	24	0	7	3	13	19	16	49	33	53	10
73	1	14	11	49	19	46	24	50	8	5	7	2	18	50	25	54	0
74	3	7	54	51	20	38	25	40	9	7	4	50	53	51	18	54	50
1675	5	1	37	53	21	31	26	30	1710	8	28	33	55	52	11	55	40
1676	6	25	20	55	22	23	27	20	1711	10	22	16	57	53	3	56	30
77	8	23	9	29	23	16	28	10	12	0	15	59	59	53	56	57	20
78	10	16	52	31	24	8	29	0	13	2	13	48	33	54	49	58	10
79	0	10	35	33	25	1	29	50	14	4	7	31	35	55	41	59	0
1680	2	4	18	35	25	53	30	40	1715	6	1	14	37	56	34	59	50
1681	4	2	7	9	26	46	31	30	1716	7	24	57	40	57	26	15	0 40
82	5	25	50	11	27	38	32	20	17	9	22	46	14	58	19	1	30
83	7	19	33	13	28	31	33	10	18	11	16	29	16	59	11	2	20
84	9	13	16	15	29	23	34	0	19	1	10	12	18	13	0 4	3	10
1685	11	11	4	50	30	16	34	50	1720	3	3	55	20	0	56	4	0
1686	1	4	47	52	31	9	35	40	1721	5	1	43	55	1	49	4	50
87	2	28	30	54	32	2	36	30	22	6	25	26	57	2	41	5	40
88	4	22	13	56	32	54	37	20	23	8	19	9	59	3	34	6	30
89	6	20	2	30	33	47	38	10	24	10	12	53	1	4	26	7	20
1690	8	13	45	32	34	39	39	0	1725	0	10	41	35	5	19	8	10
1691	10	7	28	34	35	32	39	50	1726	2	4	24	37	6	12	9	0
92	0	1	11	36	36	24	40	40	27	3	28	7	39	7	5	9	50
93	1	29	0	11	37	17	41	30	28	5	21	50	41	7	57	10	40
94	3	22	43	13	38	9	42	20	29	7	19	39	15	8	50	11	30
1695	5	16	26	15	39	2	43	10	1730	9	13	22	17	9	42	12	20

EPOCHÆ MEDIORUM MOTUUM MERCURII.

Annis Julianis ineun- tibus.	Mercurius ab Æquinoct.				Aph. ♀ 12°		Nod. ♀ 14°		Annis Julianis ineun- tibus.	Mercurius ab Æquinoct.				Aphel. ♀ 13°			Nod. ♀ 15°		
	s	o	i	ii	i	ii	i	ii		s	o	i	ii	o	i	ii	o	i	ii
1731	11	7	5	19	10	35	13	10	1766	3	4	1	22	41	15		42	20	
32	1	0	48	21	11	27	14	0	67	4	27	44	24	42	8		43	10	
33	2	28	36	56	12	20	14	50	68	6	21	27	26	43	0		44	0	
34	4	22	19	58	13	12	15	40	69	8	19	16	1	43	53		44	50	
1735	6	16	3	0	14	5	16	30	1770	10	12	59	3	44	45		45	40	
1736	8	9	46	2	14	57	17	20	1771	0	6	42	5	45	38		46	30	
37	10	7	34	36	15	50	18	10	72	2	0	25	7	46	30		47	20	
38	0	1	17	38	16	43	19	0	73	3	28	13	41	47	23		48	10	
39	1	25	0	40	17	35	19	50	74	5	21	56	43	48	15		49	0	
1740	3	18	43	42	18	28	20	40	1775	7	15	39	45	49	8		49	50	
1741	5	16	32	17	19	21	21	30	1776	9	9	22	47	50	0		50	40	
42	7	10	15	19	20	13	22	20	77	11	7	11	21	51	53		51	30	
43	9	3	58	21	21	6	23	10	78	1	0	54	23	51	46		52	20	
44	10	27	41	23	21	58	24	0	79	2	24	37	25	52	38		53	10	
1745	0	25	29	57	22	51	24	50	1780	4	18	20	27	53	31		54	0	
1746	2	19	12	59	23	43	25	40	1781	6	16	9	2	54	24		54	50	
47	4	12	56	1	24	36	26	30	82	8	9	52	4	55	16		55	40	
48	6	6	39	3	25	28	27	20	83	10	3	35	6	56	8		56	30	
49	8	4	27	38	26	21	28	10	84	11	27	18	8	57	1		57	20	
1750	9	28	10	40	27	14	29	0	1785	1	25	6	42	57	54		58	10	
1751	11	21	53	42	28	6	29	50	1786	3	18	49	44	58	46		59	0	
52	1	15	36	44	28	59	30	40	87	5	12	32	46	59	39		59	50	
53	3	13	25	18	29	52	31	30	88	7	6	15	48	14	0	31	16	0	
54	5	7	8	20	30	44	32	20	89	9	4	4	23	1	24		1	30	
1755	7	0	51	22	31	37	33	10	1790	10	27	47	25	2	17		2	20	
1756	8	24	34	24	32	29	34	0	1791	0	21	30	27	3	9		3	10	
57	10	22	22	59	33	22	34	50	92	2	15	13	29	4	2		4	0	
58	0	16	6	1	34	14	35	40	93	4	13	2	3	4	55		4	50	
59	2	9	49	3	35	7	36	30	94	6	6	45	5	5	47		5	40	
1760	4	3	32	5	35	59	37	20	1795	8	0	28	7	6	40		6	30	
1761	6	1	20	39	36	52	38	10	1796	9	24	11	9	7	32		7	20	
62	7	25	3	41	37	44	39	0	97	11	21	59	44	8	25		8	10	
63	9	18	46	43	38	37	39	50	98	1	15	42	46	9	17		9	0	
64	11	12	29	45	39	29	40	40	99	3	9	25	48	10	10		9	50	
1765	1	10	18	20	40	22	41	30	1800	5	3	8	50	11	2		10	40	

**MEDIUS MOTUS MERCURII
AD DIES MENSIVM.**

	JANUARI				FEBRUARI				MARTII				APRILIS			
Die Men- fis.	Medius Motus Mercurii.				Medius Motus Mercurii.				Medius Motus Mercurii.				Medius Motus Mercurii.			
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II
1	0	4	5	32	4	10	57	21	8	5	32	33	0	12	24	22
2	0	8	11	5	4	15	2	54	8	9	38	6	0	16	29	55
3	0	12	16	37	4	19	8	26	8	13	43	38	0	20	35	27
4	0	16	22	10	4	23	13	59	8	17	49	11	0	24	41	0
5	0	20	27	43	4	27	19	31	8	21	54	44	0	28	46	32
6	0	24	33	15	5	1	25	4	8	26	0	16	1	2	52	5
7	0	28	38	48	5	5	30	37	9	0	5	49	1	6	57	37
8	1	2	44	20	5	9	36	9	9	4	11	21	1	11	3	10
9	1	6	49	53	5	13	41	42	9	8	16	54	1	15	8	43
10	1	10	55	25	5	17	47	15	9	12	22	26	1	19	14	15
11	1	15	0	58	5	21	52	47	9	16	27	59	1	23	19	48
12	1	19	6	31	5	25	58	19	9	20	33	32	1	27	25	20
13	1	23	12	3	6	0	3	52	9	24	39	5	2	1	30	53
14	1	27	17	36	6	4	9	25	9	28	44	37	2	5	36	25
15	2	1	23	9	6	8	14	57	10	2	50	9	2	9	41	58
16	2	5	28	41	6	12	20	30	10	6	55	42	2	13	47	30
17	2	9	34	13	6	16	26	2	10	11	1	14	2	17	53	3
18	2	13	39	46	6	20	31	35	10	15	6	46	2	21	58	35
19	2	17	45	19	6	24	37	7	10	19	12	19	2	26	4	8
20	2	21	50	51	6	28	42	40	10	23	17	51	3	0	9	41
21	2	25	56	23	7	2	48	12	10	27	23	24	3	4	15	13
22	3	0	1	56	7	6	53	45	11	1	28	56	3	8	20	45
23	3	4	7	28	7	10	59	17	11	5	34	29	3	12	26	18
24	3	8	13	1	7	15	4	50	11	9	40	1	3	16	31	51
25	3	12	18	34	7	19	10	22	11	13	45	34	3	20	37	23
26	3	16	24	6	7	23	15	55	11	17	51	7	3	24	42	56
27	3	20	29	39	7	27	21	28	11	21	56	39	3	28	48	28
28	3	24	35	11	8	1	27	1	11	26	2	12	4	2	54	1
29	3	28	40	44	In Anno Biffex- tili post Februa- rium adde unius diei motum. , //				0	0	7	45	4	6	59	34
30	4	2	46	17					0	4	13	18	4	11	5	7
31	4	6	51	49					0	8	18	50				
	Mot. Aph. .				0 9				0 13				0 17			
	& Nodi. 0 4															

MEDIUS MOTVS MERCURII
AD DIES MENSIVM.

	MAII				JUNII				JULII				AUGUSTI			
Die Men- fis.	Medius Motus Mercurii.				Motus Medius Mercurii.				Medius Motus Mercurii.				Motus Medius Mercurii.			
	s	o	i	II	s	o	i	II	s	o	i	II	s	o	i	II
1	4	15	10	39	8	22	2	28	0	24	48	45	5	1	40	33
2	4	19	16	12	8	26	8	0	0	28	54	17	5	5	46	6
3	4	23	21	44	9	0	13	33	1	2	59	50	5	9	51	38
4	4	27	27	17	9	4	19	5	1	7	5	22	5	13	57	11
5	5	1	32	49	9	8	24	38	1	11	10	55	5	18	2	43
6	5	5	38	22	9	12	30	10	1	15	16	28	5	22	8	16
7	5	9	43	54	9	16	35	43	1	19	22	0	5	26	13	48
8	5	13	49	27	9	20	41	15	1	23	27	32	6	0	19	21
9	5	17	55	0	9	24	46	48	1	27	33	5	6	4	24	53
10	5	22	0	32	9	28	52	20	2	1	38	37	6	8	30	26
11	5	26	6	5	10	2	57	53	2	5	44	10	6	12	35	58
12	6	0	11	37	10	7	3	25	2	9	49	42	6	16	41	31
13	6	4	17	10	10	11	8	58	2	13	55	15	6	20	47	3
14	6	8	22	43	10	15	14	31	2	18	0	48	6	24	52	36
15	6	12	28	15	10	19	20	3	2	22	6	21	6	28	58	9
16	6	16	33	48	10	23	25	36	2	26	11	53	7	3	3	41
17	6	20	39	20	10	27	31	8	3	0	17	26	7	7	9	14
18	6	24	44	53	11	1	36	41	3	4	22	58	7	11	14	46
19	6	28	50	25	11	5	42	14	3	8	28	30	7	15	20	19
20	7	2	55	58	11	9	47	46	3	12	34	3	7	19	25	51
21	7	7	1	30	11	13	53	19	3	16	39	35	7	23	31	24
22	7	11	7	3	11	17	58	51	3	20	45	8	7	27	36	56
23	7	15	12	35	11	22	4	24	3	24	50	40	8	1	42	29
24	7	19	18	8	11	26	9	57	3	28	56	13	8	5	48	2
25	7	23	23	41	0	0	15	30	4	3	1	46	8	9	53	35
26	7	27	29	13	0	4	21	2	4	7	7	18	8	13	59	8
27	8	1	34	46	0	8	26	35	4	11	12	51	8	18	4	41
28	8	5	40	18	0	12	32	7	4	15	18	24	8	22	10	14
29	8	9	45	51	0	16	37	40	4	19	23	56	8	26	15	46
30	8	13	51	23	0	20	43	12	4	23	29	28	9	0	21	18
31	8	17	56	56					4	27	35	1	9	4	26	51
	Mot. Aph. & Nodi. 0 22				0 26				0 30				0 35			

*MEDIUS MOTUS MERCURII
AD DIES MENSIVM.*

	SEPTEMB.	OCTOBRIS	NOVEMB.	DECEMB.
<i>Die Men- fis.</i>	<i>Medius Motus Mercurii.</i>	<i>Medius Motus Mercurii.</i>	<i>Medius Motus Mercurii.</i>	<i>Medius Motus Mercurii.</i>
	<i>S O I //</i>	<i>S O I //</i>	<i>S O I //</i>	<i>S O I //</i>
1	9 8 32 23	1 11 18 40	5 18 10 29	9 20 56 45
2	9 12 37 56	1 15 24 13	5 22 16 1	9 25 2 17
3	9 16 43 38	1 19 29 45	5 26 21 34	9 29 7 50
4	9 20 49 1	1 23 35 17	6 0 27 6	10 3 13 23
5	9 24 54 33	1 27 40 50	6 4 32 39	10 7 18 55
6	9 29 0 6	2 1 46 23	6 8 38 11	10 11 24 28
7	10 3 5 38	2 5 51 55	6 12 43 44	10 15 30 1
8	10 7 11 11	2 9 57 28	6 16 49 17	10 19 35 33
9	10 11 16 43	2 14 3 0	6 20 54 49	10 23 41 6
10	10 15 22 16	2 18 8 33	6 25 0 22	10 27 46 38
11	10 19 27 48	2 22 14 5	6 29 5 54	11 1 52 11
12	10 23 33 21	2 26 19 38	7 3 11 27	11 5 57 43
13	10 27 38 54	3 0 25 11	7 7 16 59	11 10 3 16
14	11 1 44 27	3 4 30 43	7 11 22 32	11 14 8 49
15	11 5 49 59	3 8 36 16	7 15 28 5	11 18 14 21
16	11 9 55 32	3 12 41 49	7 19 33 37	11 22 19 54
17	11 14 1 4	3 16 47 21	7 23 39 9	11 26 25 26
18	11 18 6 37	3 20 52 53	7 27 44 42	0 0 30 59
19	11 22 12 9	3 24 58 26	8 1 50 15	0 4 36 22
20	11 26 17 42	3 29 3 59	8 5 55 47	0 8 42 4
21	0 0 23 15	4 3 9 31	8 10 1 20	0 12 47 37
22	0 4 28 47	4 7 15 4	8 14 6 52	0 16 53 10
23	0 8 34 20	4 11 20 36	8 18 12 25	0 20 58 42
24	0 12 39 53	4 15 26 9	8 22 17 57	0 25 4 15
25	0 16 45 25	4 19 31 41	8 26 23 30	0 29 9 47
26	0 20 50 58	4 23 37 14	9 0 29 3	1 3 15 19
27	0 24 56 30	4 27 42 46	9 4 34 35	1 7 20 52
28	0 29 2 3	5 1 48 19	9 8 40 7	1 11 26 25
29	1 3 7 35	5 5 53 51	9 12 45 40	1 15 31 57
30	1 7 13 7	5 9 59 24	9 16 51 13	1 19 37 30
31	<i>/ //</i>	5 14 4 56	<i>/ //</i>	1 23 43 2
	<i>Mot. Aph. & Nodi. 0 39</i>	<i>0 43</i>	<i>0 48</i>	<i>0 52</i>

MEDII MOTUS MERCURII AB ÆQUINOCTIO.

IN ANNORUM CENTURIIS.

IN HORIS ET MIN.

Annis Julian. Collect.	Medius Motus Mercurii.				Mot. Aphel. Mercurii.				Motus Nodi Mercurii.				Medius Motus Mercurii.							
	S	O	I	II	S	O	I	II	S	O	I	II	II	II	III	IIII	II	II	III	IIII
100	2	14	1	53	0	1	27	37	0	1	23	20	I	0	10	14	31	5	17	9
200	4	28	3	46	0	2	55	14	0	2	46	40	2	0	20	28	32	5	27	23
300	7	12	5	39	0	4	22	51	0	4	10	0	3	0	30	42	33	5	37	37
400	9	26	7	32	0	5	50	28	0	5	33	20	4	0	40	55	34	5	47	51
500	0	10	9	25	0	7	18	5	0	6	56	40	5	0	51	9	35	5	58	5
600	2	24	11	18	0	8	45	42	0	8	20	0	6	I	I	23	36	6	8	18
700	5	8	13	11	0	10	13	19	0	9	43	20	7	I	II	37	37	6	18	32
800	7	22	15	4	0	11	40	56	0	11	6	40	8	I	21	51	38	6	28	46
900	10	6	16	57	0	13	8	33	0	12	30	0	9	I	32	5	39	6	39	0
1000	0	20	18	50	0	14	36	10	0	13	53	20	10	I	42	18	40	6	49	14
1100	3	4	20	43	0	16	3	47	0	15	16	40	11	I	52	32	41	6	59	28
1200	5	18	22	36	0	17	31	24	0	16	40	0	12	2	2	46	42	7	9	42
1300	8	2	24	29	0	18	59	I	0	18	3	20	13	2	13	0	43	7	19	55
1400	10	16	26	22	0	20	26	38	0	19	26	40	14	2	23	14	44	7	30	9
1500	I	0	28	15	0	21	54	15	0	20	50	0	15	2	33	28	45	7	40	23
1600	3	14	30	8	0	23	21	52	0	22	13	20	16	2	43	42	46	7	50	37
1700	5	28	32	I	0	24	49	29	0	23	36	40	17	2	53	55	47	8	0	51
1800	8	12	33	54	0	26	17	6	0	25	0	0	18	3	4	9	48	8	11	5
1900	10	26	35	47	0	27	44	43	0	26	23	20	19	3	14	23	49	8	21	19
2000	I	10	37	40	0	29	12	20	0	27	46	40	20	3	24	37	50	8	31	32
2100	3	24	39	33	I	0	39	57	0	29	10	0	21	3	34	51	51	8	41	46
2200	6	8	41	26	I	2	7	34	I	0	33	20	22	3	45	5	52	8	52	0
2300	8	22	43	19	I	3	35	11	I	I	56	40	23	3	55	19	53	9	2	14
2400	11	6	45	12	I	5	2	48	I	3	20	0	24	4	5	32	54	9	12	28
2500	I	20	47	5	I	6	30	25	I	4	43	20	25	4	15	46	55	9	22	42
2600	4	4	48	58	I	7	58	2	I	6	6	40	26	4	26	0	56	9	32	55
2700	6	18	50	51	I	9	25	39	I	7	30	0	27	4	36	14	57	9	43	9
2800	9	2	52	44	I	10	53	16	I	8	53	20	28	4	46	28	58	9	53	23
2900	11	16	54	37	I	12	20	53	I	10	16	40	29	4	56	42	59	10	3	37
3000	2	0	56	30	I	13	48	30	I	11	40	0	30	5	6	55	60	10	13	50
3100	4	14	58	23	I	15	16	7	I	13	3	20								
3200	6	29	0	16	I	16	43	44	I	14	26	40								

TABULA EQUATIONUM MERCURII.

Anomalia media Mercurii.

Gr.	Sig. o. Subtr.			Diff.	Sig. I. Subtr.			Diff.	Sig. II. Subtr.			Diff.	
	o	i	''		o	i	''		o	i	''		
0	0	0	0		9	35	33		17	48	34		30
1	0	19	37	19 37	9	53	48	18 15	18	2	29	13 55	29
2	0	39	14	19 37	10	11	58	18 10	18	16	11	13 42	28
3	0	58	51	19 37	10	30	2	18 4	18	29	41	13 30	27
4	1	18	27	19 36	10	48	0	17 58	18	42	58	13 17	26
5	1	38	3	19 36	11	5	52	17 52	18	56	2	13 4	25
6	1	57	38	19 35	11	23	37	17 45	19	8	53	12 51	24
7	2	17	12	19 34	11	41	15	17 38	19	21	30	12 37	23
8	2	36	44	19 32	11	58	47	17 32	19	33	53	12 23	22
9	2	56	15	19 31	12	16	12	17 25	19	46	3	12 10	21
10	3	15	45	19 30	12	33	30	17 18	19	57	58	11 55	20
11	3	35	13	19 28	12	50	40	17 10	20	9	37	11 39	19
12	3	54	39	19 26	13	7	42	17 2	20	21	2	11 25	18
13	4	14	3	19 24	13	24	37	16 55	20	32	11	11 9	17
14	4	33	24	19 21	13	41	24	16 47	20	43	5	10 54	16
15	4	52	43	19 19	13	58	2	16 38	20	53	43	10 38	15
16	5	12	0	19 17	14	14	32	16 30	21	4	5	10 22	14
17	5	31	14	19 14	14	30	53	16 21	21	14	10	10 5	13
18	5	50	24	19 10	14	47	6	16 13	21	23	58	9 48	12
19	6	9	31	19 7	15	3	9	16 3	21	33	30	9 32	11
20	6	28	36	19 5	15	19	3	15 54	21	42	44	9 14	10
21	6	47	36	19 0	15	34	47	15 44	21	51	39	8 55	9
22	7	6	33	18 57	15	50	21	15 34	22	0	16	8 37	8
23	7	25	26	18 53	16	5	45	15 24	22	8	36	8 20	7
24	7	44	15	18 49	16	20	59	15 14	22	16	37	8 1	6
25	8	3	0	18 45	16	36	2	15 3	22	24	19	7 42	5
26	8	21	40	18 40	16	50	55	14 53	22	31	41	7 22	4
27	8	40	15	18 35	17	5	37	14 42	22	38	43	7 2	3
28	8	58	46	18 31	17	20	8	14 31	22	45	25	6 42	2
29	9	17	12	18 26	17	34	27	14 19	22	51	47	6 22	1
30	9	35	33	18 21	17	48	34	14 7	22	57	49	6 2	0
	Sig. XI. Adde.			Diff.	Sig. X. Adde.			Diff.	Sig. IX. Adde.			Diff.	Gr.

TABULA EQUATIONUM MERCURII.

Anomalia media Mercurii.

Gr.	Sig. III. Subtr.			Diff.		Sig. IV. Subtr.			Diff.		Sig. V. Subtr.			Diff.		
	o	i	ii			o	i	ii			o	i	ii			
0	22	57	49			22	48	11			14	57	14			30
1	23	3	29	5	40	22	40	33	7	38	14	32	56	24	18	29
2	23	8	48	5	19	22	32	22	8	11	14	8	7	24	49	28
3	23	13	45	4	57	22	23	40	8	42	13	42	48	25	19	27
4	23	18	19	4	34	22	14	25	9	15	13	16	59	25	49	26
5	23	22	31	4	12	22	4	38	9	47	12	50	40	26	19	25
6	23	26	21	3	50	21	54	18	10	20	12	23	52	26	48	
7	23	29	47	3	26	21	43	25	10	53	11	56	37	27	15	24
8	23	32	50	3	3	21	31	59	11	26	11	28	57	27	40	23
9	23	35	28	2	38	21	19	59	12	0	11	0	50	28	7	22
10	23	37	42	2	14	21	7	25	12	34	10	32	18	28	33	21
11	23	39	31	1	49	20	54	17	13	8	10	3	21	28	57	20
12	23	40	56	1	25	20	40	35	13	42	9	34	0	29	21	19
13	23	41	55	0	59	20	26	20	14	15	9	4	17	29	43	18
14	23	42	29	0	34	20	11	31	14	49	8	34	13	30	4	17
15	23	42	36	0	7	19	56	8	15	23	8	3	47	30	26	16
16	23	42	18	0	18	19	40	9	15	58	7	33	2	30	45	15
17	23	41	32	0	46	19	23	36	16	33	7	2	1	31	1	14
18	23	40	18	1	14	19	6	29	17	7	6	30	41	31	20	13
19	23	38	37	1	41	18	48	48	17	41	5	59	5	31	36	12
20	23	36	29	2	8	18	30	32	18	16	5	27	14	31	51	11
21	23	33	52	2	37	18	11	43	18	49	4	55	11	32	3	10
22	23	30	46	3	6	17	52	20	19	23	4	22	55	32	16	9
23	23	27	11	3	35	17	32	23	19	57	3	50	27	32	28	8
24	23	23	8	4	3	17	11	52	20	31	3	17	48	32	39	7
25	23	18	35	4	33	16	50	47	21	5	2	45	2	32	46	6
26	23	13	31	5	4	16	29	9	21	38	2	12	10	32	52	5
27	23	7	57	5	34	16	6	59	22	10	1	39	12	32	58	4
28	23	1	52	6	5	15	44	16	22	43	1	6	11	33	2	3
29	22	55	17	6	35	15	21	1	23	15	0	33	6	33	5	2
30	22	48	11	7	6	14	57	14	23	47	0	0	0	33	6	1
	Sig. VIII. Adde.			Diff.		Sig. VII. Adde.			Diff.		Sig. VI. Adde.			Diff.		

LOGARITHMI DISTANTIARUM MERCURII A SOLE.

Anomalia media Mercurii.

Gr.	Sig. o. Logar.	Diffe- rentia.	Sig. I. Logar.	Diffe- rentia.	Sig. II. Logar.	Diffe- rentia.	
0	4 669131	8	4 662120		4 640896		30
1	4 669123	23	4 661643	477	4 639940	956	29
2	4 669100	39	4 661151	492	4 638968	972	28
3	4 669061	55	4 660643	508	4 637980	988	27
4	4 669006	70	4 660119	524	4 636976	1004	26
5	4 668936	85	4 659579	540	4 635956	1020	25
6	4 668851	101	4 659024	555	4 634920	1036	24
7	4 668750	117	4 658452	572	4 633868	1052	23
8	4 668633	132	4 657864	588	4 632800	1068	22
9	4 668501	148	4 657261	603	4 631716	1084	21
10	4 668353	163	4 656642	619	4 630617	1099	20
11	4 668190	178	4 656007	635	4 629501	1116	19
12	4 668012	195	4 655356	651	4 628370	1131	18
13	4 667817	210	4 654688	667	4 627223	1147	17
14	4 667607	225	4 654005	683	4 626060	1163	16
15	4 667382	241	4 653306	699	4 624881	1179	15
16	4 667141	257	4 652591	715	4 623687	1194	14
17	4 666884	272	4 651860	731	4 622478	1209	13
18	4 666612	288	4 651113	747	4 621253	1225	12
19	4 666324	304	4 650350	763	4 620012	1241	11
20	4 666020	319	4 649571	779	4 618756	1256	10
21	4 665701	336	4 648775	796	4 617485	1271	9
22	4 665365	351	4 647964	811	4 616199	1286	8
23	4 665014	366	4 647136	828	4 614898	1301	7
24	4 664648	382	4 646293	843	4 613582	1316	6
25	4 664266	398	4 645433	860	4 612251	1331	5
26	4 663868	413	4 644558	875	4 610905	1346	4
27	4 663455	429	4 643667	891	4 609545	1360	3
28	4 663026	445	4 642759	908	4 608170	1375	2
29	4 662581	461	4 641835	924	4 606781	1389	1
30	4 662120		4 640896	939	4 605378	1403	0
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARUM MERCURII A SOLE.

Anomalia media Mercurii.

Gr.	Sig. III. Logar.	Diffe- rentia.	Sig. IV. Logar.	Diffe- rentia.	Sig. V. Logar.	Diffe- rentia.	
0	4 605378		4 557951		4 509939		30
1	4 603961	1417	4 556255	1696	4 508606	1333	29
2	4 602530	1431	4 554557	1698	4 507302	1304	28
3	4 601085	1445	4 552859	1698	4 506030	1272	27
4	4 599627	1458	4 551160	1699	4 504791	1239	26
5	4 598155	1472	4 549462	1698	4 503586	1205	25
		1484		1698		1170	
6	4 596671	1497	4 547764	1695	4 502416	1133	24
7	4 595174	1510	4 546069	1692	4 501283	1097	23
8	4 593664	1522	4 544377	1688	4 500186	1057	22
9	4 592142	1534	4 542689	1684	4 499129	1016	21
10	4 590608	1546	4 541005	1677	4 498113	976	20
		1557		1672		933	19
11	4 589062	1568	4 539328	1663	4 497137	890	18
12	4 587505	1579	4 537656	1655	4 496204	844	17
13	4 585937	1590	4 535993	1645	4 495314	799	16
14	4 584358	1600	4 534338	1635	4 494470	752	15
15	4 582768	1610	4 532693	1623	4 493671	704	14
		1619		1610		658	13
16	4 581168	1628	4 531058	1596	4 492919	607	12
17	4 579558	1636	4 529435	1581	4 492215	557	11
18	4 577939	1645	4 527825	1564	4 491557	506	10
19	4 576311	1652	4 526229	1547	4 490950	455	9
20	4 574675	1659	4 524648	1528	4 490393	403	8
		1666		1508		350	7
21	4 573030	1672	4 523084	1487	4 489887	297	6
22	4 571378	1677	4 521537	1466	4 489432	244	5
23	4 569719	1682	4 520009	1441	4 488987	190	4
24	4 568053	1687	4 518501	1416	4 488679	135	3
25	4 566381	1690	4 517014	1390	4 488382	81	2
		1694		1362		28	1
26	4 564704		4 515548		4 487948		0
27	4 563022		4 514107		4 487813		
28	4 561335		4 512691		4 487732		
29	4 559645		4 511301		4 487704		
30	4 557951		4 509939				
	Sig. VIII.	Diff.	Sig. VII.	Diff.	Sig. VI	Diff.	Gr.

TABULA LATITUDINARIA MERCURII.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor.	Subtr.		Sig. 1. Bor.	Subtr.		Sig. 2. Bor.	Subtr.		
	Sig. 6. Auf.	Subtr.	Cur- tatio	Sig. 7. Auf.	Subtr.	Cur- tatio.	Sig. 8. Auf.	Subtr.	Cur- tatio.	
Gr.	Inclinatio.	Reduct.	Log.	Inclinatio.	Reduct.	Log.	Inclinatio.	Reduct.	Log.	
0	0 0 0	0 0	0	3 29 17	11 5	805	6 2 56	11 7	2425	30
1	0 7 18	0 27	1	3 35 35	11 18	855	6 6 32	10 54	2473	29
2	0 14 36	0 53	4	3 41 49	11 30	905	6 10 2	10 39	2521	28
3	0 21 54	1 20	9	3 47 59	11 42	956	6 13 26	10 24	2567	27
4	0 29 11	1 47	16	3 54 5	11 52	1008	6 16 43	10 7	2613	26
5	0 36 27	2 13	24	4 0 7	12 2	1060	6 19 52	9 51	2657	25
6	0 43 43	2 39	35	4 6 4	12 11	1114	6 22 55	9 33	2700	24
7	0 50 59	3 5	48	4 11 58	12 19	1168	6 25 51	9 15	2741	23
8	0 58 13	3 31	62	4 17 46	12 26	1222	6 28 40	8 56	2781	22
9	1 5 26	3 57	79	4 23 30	12 32	1277	6 31 21	8 36	2820	21
10	1 12 38	4 22	97	4 29 9	12 37	1333	6 33 56	8 16	2858	20
11	1 19 49	4 47	117	4 34 43	12 41	1388	6 36 23	7 55	2894	19
12	1 26 58	5 12	139	4 40 12	12 45	1444	6 38 43	7 33	2928	18
13	1 34 6	5 36	163	4 45 36	12 47	1501	6 40 55	7 11	2960	17
14	1 41 12	6 0	188	4 50 55	12 48	1557	6 43 1	6 49	2991	16
15	1 48 17	6 23	215	4 56 9	12 49	1614	6 44 58	6 26	3021	15
16	1 55 19	6 46	244	5 1 17	12 48	1670	6 46 49	6 2	3048	14
17	2 2 19	7 9	275	5 6 19	12 47	1726	6 48 32	5 38	3074	13
18	2 9 17	7 31	307	5 11 16	12 45	1783	6 50 7	5 14	3098	12
19	2 16 13	7 52	341	5 16 8	12 42	1839	6 51 35	4 49	3120	11
20	2 23 6	8 13	376	5 20 54	12 38	1895	6 52 56	4 24	3141	10
21	2 29 57	8 33	413	5 25 34	12 33	1951	6 54 9	3 58	3159	9
22	2 36 45	8 53	452	5 30 7	12 27	2006	6 55 14	3 33	3176	8
23	2 43 30	9 12	491	5 34 35	12 20	2060	6 56 11	3 7	3191	7
24	2 50 12	9 30	532	5 38 57	12 12	2114	6 57 1	2 40	3203	6
25	2 56 51	9 48	575	5 43 13	12 3	2167	6 57 44	2 14	3214	5
26	3 3 27	10 5	619	5 47 22	11 54	2220	6 58 18	1 47	3223	4
27	3 10 0	10 21	664	5 51 25	11 44	2273	6 58 45	1 21	3230	3
28	3 16 29	10 36	710	5 55 22	11 33	2325	6 59 4	0 54	3235	2
29	3 22 55	10 51	757	5 59 12	11 20	2375	6 59 16	0 27	3238	1
30	3 29 17	11 5	805	6 2 56	11 7	2425	6 59 20	0 0	3239	0
	Sig. 11. Auf.	Adde.		Sig. 10. Auf.	Adde.		Sig. 9. Auf.	Adde.		
	Sig. 5. Bor.	Adde.		Sig. 4. Bor.	Adde.		Sig. 3. Bor.	Adde.		Gr.

EPOCHÆ MEDIORUM MOTUUM VENERIS.

Annis Julianis ineun- tibus.	Venus ab Æquinoct.				Aphel. ♀ ♂ 5°		Nod. ♀ ♂ 13°		Annis Julianis ineun- tibus.	Venus ab Æquinoct.				Aph. ♀ ♂ 6°		Nodus ♀ ♂ 13°		
	s	o	i	II	o	i	II	i		II	s	o	i	II	i	II	o	i
1661	6	2	16	18	54	47	37	44	1696	4	22	47	21	27	44	55	49	
62	1	17	3	47	55	44	38	15	97	0	9	10	58	28	40	56	20	
63	9	1	51	16	56	40	38	46	98	7	23	58	27	29	37	56	51	
64	4	16	38	45	57	36	39	17	99	3	8	45	57	30	33	57	22	
1665	0	3	2	22	58	33	39	48	1700	10	23	33	26	31	29	57	53	
1666	7	17	49	52	59	29	40	19	1701	6	9	57	3	32	26	58	24	
67	3	2	37	21	6	0	26	40	2	1	24	44	32	33	22	58	55	
68	10	17	24	50	1	22	41	21	3	9	9	32	1	34	19	59	26	
69	6	3	48	27	2	19	41	52	4	4	24	19	30	35	15	59	57	
1670	1	18	35	56	3	15	42	23	1705	0	10	43	7	36	11	14	0	28
1671	9	3	23	25	4	11	42	54	1706	7	25	30	36	37	8	0	59	
72	4	18	10	54	5	8	43	25	7	3	10	18	6	38	5	1	30	
73	0	4	34	31	6	5	43	56	8	10	25	5	35	39	1	2	1	
74	7	19	22	1	7	1	44	27	9	6	11	29	12	39	58	2	32	
1675	3	4	9	30	7	57	44	58	1710	1	26	16	41	40	54	3	3	
1676	10	18	56	59	8	54	45	29	1711	9	11	4	10	41	50	3	34	
77	6	5	20	36	9	50	46	0	12	4	25	51	39	42	47	4	5	
78	1	20	8	5	10	47	46	31	13	0	12	15	16	43	44	4	36	
79	9	4	55	34	11	44	47	2	14	7	27	2	45	44	40	5	7	
1680	4	19	43	3	12	40	47	33	1715	3	11	50	15	45	37	5	38	
1681	0	6	6	40	13	36	48	4	1716	10	26	37	44	46	33	6	9	
82	7	20	54	10	14	33	48	35	17	6	13	1	21	47	29	6	40	
83	3	5	41	39	15	29	49	6	18	1	27	48	50	48	26	7	11	
84	10	20	29	8	16	26	49	37	19	9	12	36	19	49	22	7	42	
1685	6	6	52	45	17	22	50	8	1720	4	27	23	48	50	19	8	13	
1686	1	21	40	14	18	19	50	39	1721	0	13	47	25	51	15	8	44	
87	9	6	27	43	19	15	51	10	22	7	28	34	54	52	11	9	15	
88	4	21	15	12	20	12	51	41	23	3	13	22	24	53	8	9	46	
89	0	7	38	49	21	8	52	12	24	10	28	9	53	54	5	10	17	
1690	7	22	26	18	22	5	52	43	1725	6	14	33	30	55	1	10	48	
1691	3	7	13	48	23	1	53	14	1726	1	29	20	59	55	58	11	19	
92	10	22	1	17	23	58	53	45	27	9	14	8	28	56	54	11	50	
93	6	8	24	54	24	54	54	16	28	4	28	55	57	57	50	12	21	
94	1	23	12	23	25	50	54	47	29	0	15	19	34	58	47	12	52	
1695	9	7	59	52	26	47	55	18	1730	8	0	7	3	59	44	13	23	

EPOCHÆ MEDIORUM MOTUUM VENERIS.

Annis Juli- anis ineun- tibus.	Venus ab Æquinoct.				Aphel. ♀ ☿ 7°			Nod. ♀ ♄ 14°	
	s	o	i	II	o	i	II	i	II
1731	3	14	54	32	7	0	40	13	54
32	10	29	42	2	1	36	14	25	
33	6	16	5	39	2	33	14	56	
34	2	0	53	8	3	29	15	27	
1735	9	15	40	37	4	26	15	58	
1736	5	0	28	6	5	22	16	29	
37	0	16	51	43	6	19	17	0	
38	8	1	39	12	7	15	17	31	
39	3	16	26	41	8	12	18	2	
1740	11	1	14	11	9	8	18	33	
1741	6	17	37	48	10	5	19	4	
42	2	2	25	17	11	2	19	35	
43	9	17	12	46	11	58	20	6	
44	5	2	0	15	12	55	20	37	
1745	0	18	23	52	13	51	21	8	
1746	8	3	11	21	14	48	21	39	
47	3	17	58	50	15	44	22	10	
48	11	2	46	20	16	40	22	41	
49	6	19	9	57	17	36	23	12	
1750	2	3	57	26	18	33	23	43	
1751	9	18	44	55	19	29	24	14	
52	5	3	32	24	20	26	24	45	
53	0	19	56	1	21	22	25	16	
54	8	4	43	30	22	19	25	47	
1755	3	19	30	59	23	15	26	18	
1756	11	4	18	28	24	12	26	49	
57	6	20	42	5	25	8	27	20	
58	2	5	29	35	26	5	27	51	
59	9	20	17	4	27	2	28	22	
1760	5	5	4	33	27	58	28	53	
1761	0	21	28	10	28	55	29	24	
62	8	6	15	39	29	51	29	55	
63	3	21	3	8	30	48	30	26	
64	11	5	50	37	31	44	30	57	
1765	6	22	14	14	32	40	31	28	

Annis Juli- anis ineun- tibus.	Venus ab Æquinoct.				Aphel. ♀ ☿ 7°			Nod. ♀ ♄ 14°	
	s	o	i	II	o	i	II	i	II
1766	2	7	1	44	33	36	31	59	
67	9	21	49	13	34	33	32	30	
68	5	6	36	42	35	29	33	1	
69	0	23	0	19	36	26	33	32	
1770	8	7	47	48	37	22	34	3	
1771	3	22	35	17	38	19	34	34	
72	11	7	22	46	39	15	35	5	
73	6	23	46	23	40	12	35	36	
74	2	8	33	53	41	8	36	7	
1775	9	23	21	22	42	5	36	38	
1776	5	8	8	51	43	2	37	9	
77	0	24	32	28	43	58	37	40	
78	8	9	19	57	44	55	38	11	
79	3	24	7	26	45	51	38	42	
1780	11	8	54	55	46	48	39	13	
1781	6	25	18	32	47	44	39	44	
82	2	10	6	1	48	40	40	15	
83	9	24	53	31	49	36	40	46	
84	5	9	41	0	50	33	41	17	
1785	0	26	4	37	51	29	41	48	
1786	8	10	52	6	52	26	42	19	
87	3	25	39	35	53	22	42	50	
88	11	10	27	4	54	19	43	21	
89	6	26	50	41	55	15	43	52	
1790	2	11	38	10	56	12	44	23	
1791	9	26	25	40	57	8	44	54	
92	5	11	13	9	58	5	45	25	
93	0	27	36	46	59	2	45	56	
94	8	12	24	15	59	58	46	27	
1795	3	27	11	44	8	0	46	58	
1796	11	11	59	13	1	51	47	29	
97	6	28	22	50	2	48	48	0	
98	2	13	10	19	3	44	48	31	
99	9	27	57	49	4	40	49	2	
1800	5	12	45	18	5	36	49	33	

*MEDIUS MOTUS VENERIS
AD DIES MENSIVM.*

	JANUARI	FEBRUARI	MARTII	APRILIS
<i>Die Men- fis.</i>	<i>Medius Motus Veneris.</i>	<i>Medius Motus Veneris.</i>	<i>Medius Motus Veneris.</i>	<i>Medius Motus Veneris.</i>
	<i>s o / //</i>	<i>s o / //</i>	<i>s o / //</i>	<i>s o / //</i>
1	0 1 36 8	1 21 16 10	3 6 7 48	4 25 47 50
2	0 3 12 16	1 22 52 17	3 7 43 56	4 27 23 58
3	0 4 48 23	1 24 28 25	3 9 20 4	4 29 0 6
4	0 6 24 31	1 26 4 33	3 10 56 12	5 0 36 13
5	0 8 0 39	1 27 40 41	3 12 32 19	5 2 12 21
6	0 9 36 47	1 29 16 49	3 14 8 27	5 3 48 29
7	0 11 12 55	2 0 52 56	3 15 44 35	5 5 24 37
8	0 12 49 2	2 2 29 4	3 17 20 43	5 7 0 45
9	0 14 25 10	2 4 5 12	3 18 56 51	5 8 36 52
10	0 16 1 18	2 5 41 20	3 20 32 58	5 10 13 0
11	0 17 37 26	2 7 17 28	3 22 9 6	5 11 49 8
12	0 19 13 34	2 8 53 36	3 23 45 14	5 13 25 16
13	0 20 49 41	2 10 29 43	3 25 21 22	5 15 1 24
14	0 22 25 49	2 12 5 51	3 26 57 30	5 16 37 31
15	0 24 1 57	2 13 41 59	3 28 33 37	5 18 13 39
16	0 25 38 5	2 15 18 7	4 0 9 45	5 19 49 47
17	0 27 14 13	2 16 54 15	4 1 45 53	5 21 25 55
18	0 28 50 20	2 18 30 22	4 3 22 1	5 23 2 3
19	1 0 26 28	2 20 6 30	4 4 58 9	5 24 38 10
20	1 2 2 36	2 21 42 38	4 6 34 16	5 26 14 18
21	1 3 38 44	2 23 18 46	4 8 10 24	5 27 50 26
22	1 5 14 52	2 24 54 54	4 9 46 32	5 29 26 34
23	1 6 50 59	2 26 31 1	4 11 22 40	6 1 2 42
24	1 8 27 7	2 28 7 9	4 12 58 48	6 2 38 49
25	1 10 3 15	2 29 43 17	4 14 34 55	6 4 14 57
26	1 11 39 23	3 1 19 25	4 16 11 3	6 5 51 5
27	1 13 15 31	3 2 55 33	4 17 47 11	6 7 27 13
28	1 14 51 38	3 4 31 40	4 19 23 19	6 9 3 21
29	1 16 27 46	<i>In Anno Biffex- tili post Februa- rium adde unius diei motum. / //</i>	4 20 59 27	6 10 39 28
30	1 18 3 54		4 22 35 34	6 12 15 36
31	1 19 40 2		4 24 11 42	/ //
	<i>Mot. Aph. 0 5</i>	0 9	0 14	0 19
	<i>Mot. Nod. 0 3</i>	0 5	0 8	0 11

MEDIUS MOTUS VENERIS
AD DIES MENSIVM.

	MAII	JUNII	JULII	AUGUSTI
Die Men- fis.	Medius Motus Veneris.	Medius Motus Veneris.	Medius Motus Veneris.	Medius Motus Veneris.
	S O I //	S O I //	S O I //	S O I //
1	6 13 51 44	8 3 31 46	9 21 35 40	11 11 15 42
2	6 15 27 52	8 5 7 54	9 23 11 48	11 12 51 50
3	6 17 4 0	8 6 44 2	9 24 47 56	11 14 27 58
4	6 18 40 8	8 8 20 9	9 26 24 3	11 16 4 5
5	6 20 16 15	8 9 56 17	9 28 0 11	11 17 40 13
6	6 21 52 23	8 11 32 25	9 29 36 19	11 19 16 21
7	6 23 28 31	8 13 8 33	10 1 12 27	11 20 52 29
8	6 25 4 39	8 14 44 41	10 2 48 35	11 22 28 37
9	6 26 40 47	8 16 20 48	10 4 24 43	11 24 4 44
10	6 28 16 54	8 17 56 56	10 6 0 50	11 25 40 52
11	6 29 53 2	8 19 33 4	10 7 36 58	11 27 17 0
12	7 1 29 10	8 21 9 12	10 9 13 6	11 28 53 8
13	7 3 5 18	8 22 45 20	10 10 49 14	0 0 29 16
14	7 4 41 26	8 24 21 27	10 12 25 22	0 2 5 23
15	7 6 17 33	8 25 57 35	10 14 1 29	0 3 41 31
16	7 7 53 41	8 27 33 43	10 15 37 37	0 5 17 39
17	7 9 29 49	8 29 9 51	10 17 13 45	0 6 53 47
18	7 11 5 57	9 0 45 59	10 18 49 53	0 8 29 55
19	7 12 42 5	9 2 22 6	10 20 26 1	0 10 6 2
20	7 14 18 12	9 3 58 14	10 22 2 8	0 11 42 10
21	7 15 54 20	9 5 34 22	10 23 38 16	0 13 18 18
22	7 17 30 28	9 7 10 30	10 25 14 24	0 14 54 26
23	7 19 6 36	9 8 46 38	10 26 50 32	0 16 30 34
24	7 20 42 44	9 10 22 45	10 28 26 40	0 18 6 41
25	7 22 18 51	9 11 58 53	11 0 2 47	0 19 42 49
26	7 23 54 59	9 13 35 1	11 1 38 55	0 21 18 57
27	7 25 31 7	9 15 11 9	11 3 15 3	0 22 55 5
28	7 27 7 15	9 16 47 17	11 4 51 11	0 24 31 13
29	7 28 43 23	9 18 23 24	11 6 27 19	0 26 7 20
30	8 0 19 30	9 19 59 32	11 8 3 26	0 27 43 28
31	8 1 55 38	/ //	11 9 39 34	0 29 19 36
	Mot. Aph. 0 23	0 28	0 32	0 37
	Mot. Nod. 0 13	0 15	0 18	0 21

MEDIUS MOTUS VENERIS
AD DIES MENSIVM.

	SEPTEMB.				OCTOBRIS				NOVEMB.				DECEMB.			
Die Men- fis.	Medius Motus Veneris.				Medius Motus Veneris.				Medius Motus Veneris.				Medius Motus Veneris.			
	S	o	i	II	S	o	i	II	S	o	i	II	S	o	i	II
1	I	0	55	44	2	18	59	38	4	8	39	40	5	26	43	34
2	I	2	31	52	2	20	35	46	4	10	15	48	5	28	19	42
3	I	4	7	59	2	22	11	54	4	11	51	55	5	29	55	50
4	I	5	44	7	2	23	48	I	4	13	28	3	6	I	31	57
5	I	7	20	15	2	25	24	9	4	15	4	11	6	3	8	5
6	I	8	56	23	2	27	0	17	4	16	40	19	6	4	44	13
7	I	10	32	31	2	28	36	25	4	18	16	27	6	6	20	21
8	I	12	8	38	3	0	12	33	4	19	52	34	6	7	56	29
9	I	13	44	46	3	I	48	40	4	21	28	42	6	9	32	36
10	I	15	20	54	3	3	24	48	4	23	4	50	6	11	8	44
11	I	16	57	2	3	5	0	56	4	24	40	58	6	12	44	52
12	I	18	33	10	3	6	37	4	4	26	17	6	6	14	21	0
13	I	20	9	18	3	8	13	12	4	27	53	13	6	15	57	8
14	I	21	45	25	3	9	49	19	4	29	29	21	6	17	33	15
15	I	23	21	33	3	11	25	27	5	I	5	29	6	19	9	23
16	I	24	57	41	3	13	I	35	5	2	41	37	6	20	45	31
17	I	26	33	49	3	14	37	43	5	4	17	45	6	22	21	39
18	I	28	9	57	3	16	13	51	5	5	53	52	6	23	57	47
19	I	29	46	4	3	17	49	58	5	7	30	0	6	25	33	54
20	2	I	22	12	3	19	26	6	5	9	6	8	6	27	10	2
21	2	2	58	20	3	21	2	14	5	10	42	16	6	28	46	10
22	2	4	34	28	3	22	38	22	5	12	18	24	7	0	22	18
23	2	6	10	36	3	24	14	30	5	13	54	32	7	1	58	26
24	2	7	46	43	3	25	50	37	5	15	30	39	7	3	34	33
25	2	9	22	51	3	27	26	45	5	17	6	47	7	5	10	41
26	2	10	58	59	3	29	2	53	5	18	42	55	7	6	46	49
27	2	12	35	7	4	0	39	I	5	20	19	3	7	8	22	57
28	2	14	11	15	4	2	15	9	5	21	55	11	7	9	59	5
29	2	15	47	22	4	3	51	16	5	23	31	18	7	11	35	12
30	2	17	23	30	4	5	27	24	5	25	7	26	7	13	11	20
31					4	7	3	32					7	14	47	28
	Mot. Aph. o 42						o 47				o 52				o 56	
	Mot. Nod. o 23						o 26				o 28				o 31	

MEDIUS MOTUS VENERIS AB AEQUINOCTIO.

IN ANNORUM CENTURIIS.

IN HORIS ET MIN.

Annis Julian. Collect.	Medius Motus Veneris.				Motus Aphel. Veneris.				Motus Nodi Veneris.			Medius Motus Veneris.							
	s	o	i	ii	s	o	i	ii	o	i	ii	ii	iii	iiii	ii	iii	iiii	ii	iii
100	6	19	11	52	0	1	34	13	0	51	40	I	I	II	III	I	I	II	III
200	1	8	23	44	0	3	8	27	1	43	20	H	o	i	ii	H	o	i	ii
300	7	27	35	36	0	4	42	40	2	35	0	I	o	4	o	31	2	4	10
400	2	16	47	28	0	6	16	53	3	26	40	2	o	8	I	32	2	8	10
500	9	5	59	20	0	7	51	7	4	18	20	3	o	12	I	33	2	12	10
600	3	25	11	12	0	9	25	20	5	10	0	4	o	16	I	34	2	16	11
700	10	14	23	4	0	10	59	33	6	1	40	5	o	20	2	35	2	20	11
800	5	3	34	56	0	12	33	47	6	53	20	6	o	24	2	36	2	24	11
900	11	22	46	48	0	14	8	0	7	45	0	7	o	28	2	37	2	28	12
1000	6	11	58	40	0	15	42	13	8	36	40	8	o	32	3	38	2	32	12
1100	1	1	10	32	0	17	16	27	9	28	20	9	o	36	3	39	2	36	12
1200	7	20	22	24	0	18	50	40	10	20	0	10	o	40	3	40	2	40	13
1300	2	9	34	16	0	20	24	53	11	11	40	11	o	44	4	41	2	44	13
1400	8	28	46	8	0	21	59	7	12	3	20	12	o	48	4	42	2	48	13
1500	3	17	58	0	0	23	33	20	12	55	0	13	o	52	4	43	2	52	14
1600	10	7	9	52	0	25	7	33	13	46	40	14	o	56	4	44	2	56	14
1700	4	26	21	44	0	26	41	47	14	38	20	15	I	o	5	45	3	o	14
1800	11	15	33	36	0	28	16	0	15	30	0	16	I	4	5	46	3	4	15
1900	6	4	45	28	0	29	50	13	16	21	40	17	I	8	5	47	3	8	15
2000	0	23	57	20	I	1	24	27	17	13	20	18	I	12	6	48	3	12	16
2100	7	13	9	12	I	2	58	40	18	5	0	19	I	16	6	49	3	16	16
2200	2	2	21	4	I	4	32	53	18	56	40	20	I	20	6	50	3	20	16
2300	8	21	32	56	I	6	7	7	19	48	20	21	I	24	7	51	3	24	16
2400	3	10	44	48	I	7	41	20	20	40	0	22	I	28	7	52	3	28	17
2500	9	29	56	40	I	9	15	33	21	31	40	23	I	32	7	53	3	32	17
2600	4	19	8	32	I	10	49	47	22	23	20	24	I	36	8	54	3	36	17
2700	11	8	20	24	I	12	24	0	23	15	0	25	I	40	8	55	3	40	18
2800	5	27	32	16	I	13	58	13	24	6	40	26	I	44	8	5	3	44	18
2900	0	16	44	8	I	15	32	27	24	58	20	27	I	48	9	57	3	48	18
3000	7	5	56	0	I	17	6	40	25	50	0	28	I	52	9	58	3	52	19
3100	1	25	7	52	I	18	40	53	26	41	40	29	I	56	9	59	3	56	19
3200	8	14	19	44	I	20	15	7	27	33	20	30	2	o	10	60	4	o	19

TABULA ÆQUATIONUM VENERIS.

Anomalia media Veneris.

	Sig. 0. Subtr.	Sig. I. Subtr.	Sig. II. Subtr.	Sig. III. Subtr.	Sig. IV. Subtr.	Sig. V. Subtr.	
Gr.	° ' "	° ' "	° ' "	° ' "	° ' "	° ' "	
0	0 0 0	0 23 50	0 41 24	0 48 0	0 41 45	0 24 10	30
1	0 0 50	0 24 33	0 41 48	0 48 0	0 41 19	0 23 26	29
2	0 1 40	0 25 15	0 42 12	0 47 59	0 40 53	0 22 42	28
3	0 2 30	0 25 57	0 42 35	0 47 57	0 40 26	0 21 57	27
4	0 3 20	0 26 39	0 42 58	0 47 54	0 39 59	0 21 12	26
5	0 4 10	0 27 20	0 43 20	0 47 50	0 39 31	0 20 27	25
6	0 4 59	0 28 1	0 43 41	0 47 46	0 39 2	0 19 41	24
7	0 5 48	0 28 41	0 44 1	0 47 41	0 38 32	0 18 55	23
8	0 6 37	0 29 21	0 44 21	0 47 34	0 38 1	0 18 7	22
9	0 7 26	0 30 0	0 44 40	0 47 27	0 37 30	0 17 20	21
10	0 8 15	0 30 39	0 44 58	0 47 20	0 36 58	0 16 33	20
11	0 9 5	0 31 17	0 45 16	0 47 11	0 36 26	0 15 45	19
12	0 9 54	0 31 54	0 45 32	0 47 2	0 35 52	0 14 57	18
13	0 10 43	0 32 31	0 45 48	0 46 51	0 35 19	0 14 9	17
14	0 11 31	0 33 8	0 46 2	0 46 40	0 34 44	0 13 20	16
15	0 12 19	0 33 44	0 46 16	0 46 28	0 34 9	0 12 32	15
16	0 13 7	0 34 19	0 46 29	0 46 15	0 33 33	0 11 43	14
17	0 13 55	0 34 53	0 46 41	0 46 1	0 32 57	0 10 54	13
18	0 14 42	0 35 27	0 46 53	0 45 46	0 32 19	0 10 4	12
19	0 15 30	0 36 1	0 47 3	0 45 30	0 31 42	0 9 14	11
20	0 16 17	0 36 33	0 47 12	0 45 14	0 31 3	0 8 24	10
21	0 17 4	0 37 5	0 47 20	0 44 56	0 30 24	0 7 34	9
22	0 17 50	0 37 37	0 47 28	0 44 38	0 29 45	0 6 44	8
23	0 18 36	0 38 8	0 47 35	0 44 19	0 29 5	0 5 54	7
24	0 19 22	0 38 38	0 47 42	0 43 59	0 28 25	0 5 3	6
25	0 20 7	0 39 7	0 47 47	0 43 39	0 27 44	0 4 12	5
26	0 20 52	0 39 36	0 47 52	0 43 18	0 27 2	0 3 22	4
27	0 21 37	0 40 4	0 47 55	0 42 56	0 26 20	0 2 31	3
28	0 22 22	0 40 31	0 47 58	0 42 33	0 25 37	0 1 41	2
29	0 23 6	0 40 58	0 47 59	0 42 9	0 24 54	0 0 51	1
30	0 23 50	0 41 24	0 48 0	0 41 45	0 24 10	0 0 0	0
	Sig. XI. Adde.	Sig. X. Adde.	Sig. IX. Adde.	Sig. VIII. Adde.	Sig. VII. Adde.	Sig. VI. Adde.	Gr.

LOGARITHMI DISTANTIARUM VENERIS A SOLE.

Anomalia media Veneris.

Gr.	Sig. o. <i>Logar.</i>	Sig. I. <i>Logar.</i>	Sig. II. <i>Logar.</i>	Sig. III. <i>Logar.</i>	Sig. IV. <i>Logar.</i>	Sig. V. <i>Logar.</i>	
0	4 862359	4 861961	4 860867	4 859359	4 857835	4 856709	30
1	4 862358	4 861934	4 860821	4 859306	4 857789	4 856683	29
2	4 862356	4 861907	4 860775	4 859253	4 857743	4 856657	28
3	4 862354	4 861879	4 860729	4 859200	4 857698	4 856632	27
4	4 862352	4 861850	4 860682	4 859147	4 857653	4 856608	26
5	4 862348	4 861821	4 860635	4 859094	4 857609	4 856585	25
6	4 862343	4 861791	4 860587	4 859041	4 857566	4 856563	24
7	4 862337	4 861760	4 860539	4 858989	4 857523	4 856541	23
8	4 862330	4 861728	4 860490	4 858936	4 857480	4 856520	22
9	4 862322	4 861696	4 860441	4 858884	4 857438	4 856501	21
10	4 862314	4 861663	4 860392	4 858831	4 857397	4 856482	20
11	4 862304	4 861629	4 860342	4 858879	4 857356	4 856464	19
12	4 862294	4 861594	4 860292	4 858827	4 857316	4 856447	18
13	4 862282	4 861559	4 860242	4 858675	4 857276	4 856431	17
14	4 862270	4 861523	4 860192	4 858623	4 857237	4 856415	16
15	4 862257	4 861486	4 860141	4 858572	4 857199	4 856401	15
16	4 862244	4 861449	4 860090	4 858521	4 857161	4 856387	14
17	4 862229	4 861411	4 860039	4 858470	4 857124	4 856375	13
18	4 862214	4 861373	4 859988	4 858419	4 857088	4 856363	12
19	4 862197	4 861334	4 859936	4 858368	4 857053	4 856352	11
20	4 862180	4 861294	4 859884	4 858318	4 857018	4 856342	10
21	4 862162	4 861254	4 859832	4 858268	4 856984	4 856333	9
22	4 862143	4 861213	4 859780	4 858218	4 856950	4 856325	8
23	4 862123	4 861172	4 859728	4 858169	4 856917	4 856318	7
24	4 862102	4 861130	4 859676	4 858120	4 856885	4 856312	6
25	4 862080	4 861087	4 859623	4 858072	4 856854	4 856307	5
26	4 862058	4 861044	4 859570	4 858024	4 856823	4 856303	4
27	4 862035	4 861000	4 859518	4 857976	4 856794	4 856299	3
28	4 862011	4 860956	4 859465	4 857928	4 856765	4 856297	2
29	4 861986	4 860912	4 859412	4 857881	4 856737	4 856295	1
30	4 861961	4 860867	4 859359	4 857835	4 856709	4 856295	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA LATITUDINARIA VENERIS.

Argument. Lati- tudi- nis.	Sig. 0. Bor.			Subtr.			Cur- tatio	Sig. 1. Bor.			Subtr.			Cur- tatio	Sig. 2. Bor.			Subtr.			Cur- tatio	Gr.
	Sig. 6. Auf.			Subtr.				Sig. 7. Auf.			Subtr.				Sig. 8. Auf.			Subtr.				
	Inclinatio.			Reduct.				Inclinatio.			Reduct.				Inclinatio.			Reduct.				
Gr.	0	1	11	1	11	Log.		0	1	11	1	11	Log.		0	1	11	1	11	Log.		
0	0	0	0	0	0	0		1	41	37	2	36	190		2	56	4	2	36	570	30	
1	0	3	33	0	6	0		1	44	41	2	39	201		2	57	49	2	32	581	29	
2	0	7	6	0	13	1		1	47	42	2	42	213		2	59	30	2	29	592	28	
3	0	10	38	0	19	2		1	50	42	2	44	225		3	1	9	2	26	603	27	
4	0	14	11	0	25	4		1	53	39	2	47	237		3	2	44	2	22	614	26	
5	0	17	42	0	31	6		1	56	35	2	49	250		3	4	16	2	18	624	25	
6	0	21	14	0	37	8		1	59	28	2	51	262		3	5	44	2	14	634	24	
7	0	24	46	0	43	11		2	2	19	2	53	275		3	7	9	2	9	644	23	
8	0	28	17	0	50	15		2	5	8	2	54	288		3	8	30	2	5	653	22	
9	0	31	48	0	56	19		2	7	55	2	56	301		3	9	49	2	0	662	21	
10	0	35	17	1	1	23		2	10	39	2	57	314		3	11	3	1	56	671	20	
11	0	38	46	1	7	28		2	13	21	2	58	327		3	12	14	1	51	679	19	
12	0	42	15	1	13	33		2	16	1	2	59	340		3	13	22	1	46	687	18	
13	0	45	43	1	19	38		2	18	38	2	59	353		3	14	26	1	41	695	17	
14	0	49	10	1	24	44		2	21	12	3	0	366		3	15	27	1	35	702	16	
15	0	52	36	1	30	51		2	23	44	3	0	380		3	16	24	1	30	709	15	
16	0	56	1	1	35	58		2	26	13	3	0	393		3	17	17	1	24	716	14	
17	0	59	25	1	41	65		2	28	40	2	59	406		3	18	6	1	19	721	13	
18	1	2	48	1	46	72		2	31	4	2	59	420		3	18	53	1	13	727	12	
19	1	6	10	1	51	80		2	33	25	2	58	433		3	19	35	1	7	732	11	
20	1	9	30	1	56	89		2	35	43	2	57	446		3	20	14	1	1	737	10	
21	1	12	50	2	0	97		2	37	59	2	56	459		3	20	50	0	56	741	9	
22	1	16	8	2	5	106		2	40	12	2	54	472		3	21	21	0	50	745	8	
23	1	19	24	2	9	116		2	42	21	2	53	485		3	21	49	0	43	749	7	
24	1	22	40	2	14	125		2	44	28	2	51	497		3	22	13	0	37	752	6	
25	1	25	54	2	18	135		2	46	32	2	49	510		3	22	33	0	31	754	5	
26	1	29	5	2	22	146		2	48	32	2	47	522		3	22	50	0	25	756	4	
27	1	32	16	2	26	156		2	50	30	2	44	534		3	23	3	0	19	758	3	
28	1	35	25	2	29	167		2	52	24	2	42	546		3	23	12	0	13	759	2	
29	1	38	32	2	32	178		2	54	15	2	39	558		3	23	18	0	6	760	1	
30	1	41	37	2	36	190		2	56	4	2	36	570		3	23	20	0	0	760	0	
	Sig. 11. Auf.			Adde.				Sig. 10. Auf.			Adde.				Sig. 9. Auf.			Adde.				
	Sig. 5. Bor.			Adde.				Sig. 4. Bor.			Adde.				Sig. 3. Bor.			Adde.				

EPOCHÆ MEDIORUM MOTUUM MARTIS.

Annis Juli- anis ineun- tibus.	Mars ab Æquinoct.				Aphel. ♂ ♌ 29°			Nod. ♂ ♏ 17°		Annis Juli- anis ineun- tibus.	Mars ab Æquinoct.				Aphel. ♂ ♍ 0°			Nod. ♂ ♏ 17°		
	s	o	i	ii	o	i	ii	i	ii		s	o	i	ii	o	i	ii	i	ii	
1661	9	1	45	22	47	50	0	0		1696	4	10	57	36	28	40	22	10		
62	3	13	2	32	49	0	0	38		97	10	22	46	12	29	50	22	48		
63	9	24	19	41	50	10	1	16		98	5	4	3	22	31	0	23	26		
64	4	5	36	51	51	20	1	54		99	11	15	20	32	32	10	24	4		
1665	10	17	25	27	52	30	2	32		1700	5	26	37	42	33	20	24	42		
1666	4	28	42	37	53	40	3	10		1701	0	8	26	18	34	30	25	20		
67	11	9	59	47	54	50	3	48		2	6	19	43	28	35	40	25	58		
68	5	21	16	57	56	0	4	26		3	1	1	0	37	36	50	26	36		
69	0	3	5	33	57	10	5	4		4	7	12	17	47	38	0	27	14		
1670	6	14	22	43	58	20	5	42		1705	1	24	6	24	39	10	27	52		
1671	0	25	39	53	59	30	6	20		1706	8	5	23	34	40	20	28	30		
72	7	6	57	2	0	0	40	6	58	7	2	16	40	43	41	30	29	8		
73	1	18	45	39	♍	1	50	7	36	8	8	27	57	53	42	40	29	46		
74	8	0	2	48	3	0	8	14		9	3	9	46	29	43	50	30	24		
1675	2	11	19	58	4	10	8	52		1710	9	21	3	39	45	0	31	2		
1676	8	22	37	8	5	20	9	30		1711	4	2	20	49	46	10	31	40		
77	3	4	25	44	6	30	10	8		12	10	13	37	58	47	20	32	18		
78	9	15	42	54	7	40	10	46		13	4	25	26	35	48	30	32	56		
79	3	27	0	4	8	50	11	24		14	11	6	43	44	49	40	33	34		
1680	10	8	17	14	10	0	12	2		1715	5	18	0	54	50	50	34	12		
1681	4	20	5	50	11	10	12	40		1716	11	29	18	4	52	0	34	50		
82	11	1	23	0	12	20	13	18		17	6	11	6	40	53	10	35	28		
83	5	12	40	10	13	30	13	56		18	0	22	23	50	54	20	36	6		
84	11	23	57	19	14	40	14	34		19	7	3	41	0	55	30	36	44		
1685	6	5	45	56	15	50	15	12		1720	1	14	58	10	56	40	37	22		
1686	0	17	3	6	17	0	15	50		1721	7	26	46	46	57	50	38	0		
87	6	28	20	15	18	10	16	28		22	2	8	3	56	59	0	38	38		
88	1	9	37	25	19	20	17	6		23	8	19	21	6	1	0	10	39	16	
89	7	21	26	1	20	30	17	44		24	3	0	38	15	♍	1	20	39	54	
1690	2	2	43	11	21	40	18	22		1725	9	12	26	51	2	30	40	32		
1691	8	14	0	21	22	50	19	10		1726	3	23	44	1	3	40	41	10		
92	2	25	17	31	24	0	19	38		27	10	5	1	11	4	50	41	48		
93	9	7	6	7	25	10	20	16		28	4	16	18	21	6	0	42	26		
94	3	18	23	17	26	20	20	54		29	10	28	6	57	7	10	43	4		
1695	9	29	40	27	27	30	21	32		1730	5	19	24	17	8	20	43	42		

EPOCHÆ MEDIORUM MOTUUM MARTIS.

Annis Juli- anis ineun- tibus.	Mars ab Æquinoct.				Aph. δ M 1°		Nodus δ ♄ 17°		Annis Juli- anis ineun- tibus.	Mars ab Æquinoct.				Aphel. δ M 1°		Nod. δ ♄ 18°	
	s	o	i	''	i	''	o	i		s	o	i	''	o	i	i	''
1731	11	20	41	17	9	30	44	20	1766	7	0	24	57	50	20	6	30
32	6	1	58	27	10	40	44	58	67	1	11	42	7	51	30	7	8
33	0	13	47	3	11	50	45	36	68	7	22	59	17	52	40	7	46
34	6	25	4	13	13	0	46	14	69	2	4	47	53	53	50	8	24
1735	1	6	21	23	14	10	46	52	1770	8	16	5	3	55	0	9	2
1736	7	17	38	32	15	20	47	30	1771	2	27	22	13	56	10	9	40
37	1	29	27	8	16	30	48	8	72	9	8	39	23	57	20	10	18
38	8	10	44	18	17	40	48	46	73	3	20	27	59	58	30	10	56
39	2	22	1	28	18	50	49	24	74	10	1	45	9	59	40	11	34
1740	9	3	18	38	20	0	50	2	1775	4	13	2	19	2	0	12	12
1741	3	15	7	14	21	10	50	40	1776	10	24	19	29	2	0	12	50
42	9	26	24	24	22	20	51	18	77	5	6	8	5	3	10	13	28
43	4	7	41	34	23	30	51	56	78	11	17	25	14	4	20	14	6
44	10	18	58	43	24	40	52	34	79	5	28	42	24	5	30	14	44
1745	5	0	47	19	25	50	53	12	1780	0	9	59	34	6	40	15	22
1746	11	12	4	29	27	0	53	50	1781	6	21	48	10	7	50	16	0
47	5	23	21	39	28	10	54	28	82	1	3	5	20	9	0	16	38
48	0	4	38	49	29	20	55	6	83	7	14	22	30	10	10	17	16
49	6	16	27	25	30	30	55	44	84	1	25	39	40	11	20	17	54
1750	0	27	44	35	31	40	56	22	1785	8	7	28	16	12	30	18	32
1751	7	9	1	45	32	50	57	0	1786	2	18	45	26	13	40	19	10
52	1	20	18	55	34	0	57	38	87	9	0	2	36	14	50	19	48
53	8	2	7	31	35	10	58	16	88	3	11	19	46	16	0	20	26
54	2	13	24	41	36	20	58	54	89	9	23	8	22	17	10	21	4
1755	8	24	41	51	37	30	59	32	1790	4	4	25	31	18	20	21	42
1756	3	5	59	0	38	40	18	0	1791	10	15	42	41	19	30	22	20
57	9	17	47	36	39	50	♄	0	92	4	26	59	51	20	40	22	58
58	3	29	4	46	41	0	1	26	93	11	8	48	27	21	50	23	36
59	10	10	21	56	42	10	2	4	94	5	20	5	37	23	0	24	14
1760	4	21	39	6	43	20	2	42	1795	0	1	22	47	24	10	24	52
1761	11	3	27	42	44	30	3	20	1796	6	12	39	56	25	20	25	30
62	5	14	44	52	45	40	3	58	97	0	24	28	32	26	30	26	8
63	11	26	2	2	46	50	4	36	98	7	5	45	42	27	40	26	46
64	6	7	19	12	48	0	5	14	99	1	17	2	52	28	50	27	24
1765	0	19	7	48	49	10	5	52	1800	7	28	20	2	30	0	28	2

MEDIUS MOTUS MARTIS AD DIES MENSIVM.

	JANUARI				FEBRUARI				MARTII				APRILIS			
Die Men- fis.	Medius Motus Martis.				Medius Motus Martis.				Medius Motus Martis.				Medius Motus Martis.			
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II
1	0	0	31	27	0	16	46	13	I	1	26	39	I	17	41	26
2	0	1	2	54	0	17	17	40	I	1	58	6	I	18	12	52
3	0	1	34	20	0	17	49	6	I	2	29	33	I	18	44	19
4	0	2	5	47	0	18	20	33	I	3	0	59	I	19	15	46
5	0	2	37	13	0	18	52	0	I	3	32	26	I	19	47	12
6	0	3	8	40	0	19	23	26	I	4	3	53	I	20	18	39
7	0	3	40	7	0	19	54	53	I	4	35	19	I	20	50	6
8	0	4	11	33	0	20	26	20	I	5	6	46	I	21	21	32
9	0	4	43	0	0	20	57	46	I	5	38	13	I	21	52	59
10	0	5	14	27	0	21	29	13	I	6	9	39	I	22	24	26
11	0	5	45	53	0	22	0	40	I	6	41	6	I	22	55	52
12	0	6	17	20	0	22	32	6	I	7	12	33	I	23	27	19
13	0	6	48	47	0	23	3	33	I	7	43	59	I	23	58	46
14	0	7	20	13	0	23	35	0	I	8	15	26	I	24	30	12
15	0	7	51	40	0	24	6	26	I	8	46	53	I	25	1	39
16	0	8	23	6	0	24	37	53	I	9	18	19	I	25	33	6
17	0	8	54	33	0	25	9	19	I	9	49	46	I	26	4	32
18	0	9	26	0	0	25	40	46	I	10	21	12	I	26	35	59
19	0	9	57	26	0	26	12	13	I	10	52	39	I	27	7	26
20	0	10	28	53	0	26	43	39	I	11	24	5	I	27	38	52
21	0	11	0	20	0	27	15	6	I	11	55	32	I	28	10	19
22	0	11	31	46	0	27	46	33	I	12	26	59	I	28	41	46
23	0	12	3	13	0	28	17	59	I	12	58	26	I	29	13	12
24	0	12	34	40	0	28	49	26	I	13	29	52	I	29	44	39
25	0	13	6	6	0	29	20	53	I	14	1	19	2	0	16	6
26	0	13	37	33	0	29	52	19	I	14	32	46	2	0	47	32
27	0	14	9	0	I	0	23	46	I	15	4	12	2	1	18	59
28	0	14	40	26	I	0	55	13	I	15	35	39	2	1	50	26
29	0	15	11	53	In Anno Biffex- tilli post Februa- rium adde unius diei motum. I II				I	16	7	5	2	2	21	52
30	0	15	43	20					I	16	38	32	2	2	53	19
31	0	16	14	46					I	17	9	59				
Motus Aphelii	0	6				0	12			0	18			0	23	
Motus Nodi	0	3				0	6			0	10			0	13	

MEDIUS MOTUS MARTIS
AD DIES MENSIVM.

	MAII				JUNII				JULII				AUGUSTI			
Die Men- fis.	Medius Motus Martis.				Medius Motus Martis.				Medius Motus Martis.				Medius Motus Martis.			
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II
1	2	3	24	46	2	19	39	33	3	5	22	51	3	21	37	38
2	2	3	56	13	2	20	10	59	3	5	54	18	3	22	9	4
3	2	4	27	40	2	20	42	26	3	6	25	45	3	22	40	31
4	2	4	59	6	2	21	13	53	3	6	57	11	3	23	11	58
5	2	5	30	33	2	21	45	19	3	7	28	38	3	23	43	24
6	2	6	2	0	2	22	16	46	3	8	0	5	3	24	14	51
7	2	6	33	26	2	22	48	13	3	8	31	32	3	24	46	18
8	2	7	4	53	2	23	19	39	3	9	2	58	3	25	17	44
9	2	7	36	20	2	23	51	6	3	9	34	25	3	25	49	11
10	2	8	7	46	2	24	22	33	3	10	5	51	3	26	20	37
11	2	8	39	13	2	24	53	59	3	10	37	18	3	26	52	4
12	2	9	10	40	2	25	25	26	3	11	8	44	3	27	23	31
13	2	9	42	6	2	25	56	53	3	11	40	11	3	27	54	58
14	2	10	13	33	2	26	28	19	3	12	11	38	3	28	26	24
15	2	10	45	0	2	26	59	46	3	12	43	4	3	28	57	51
16	2	11	16	26	2	27	31	13	3	13	14	31	3	29	29	17
17	2	11	47	53	2	28	2	39	3	13	45	58	4	0	0	44
18	2	12	19	20	2	28	34	5	3	14	17	24	4	0	32	11
19	2	12	50	46	2	29	5	32	3	14	48	51	4	1	3	37
20	2	13	22	13	2	29	36	59	3	15	20	18	4	1	35	4
21	2	13	53	40	3	0	8	25	3	15	51	44	4	2	6	30
22	2	14	25	6	3	0	39	52	3	16	23	11	4	2	37	57
23	2	14	56	33	3	1	11	18	3	16	54	38	4	3	9	24
24	2	15	27	59	3	1	42	45	3	17	26	4	4	3	40	50
25	2	15	59	26	3	2	14	12	3	17	57	31	4	4	12	17
26	2	16	30	53	3	2	45	38	3	18	28	58	4	4	43	44
27	2	17	2	19	3	3	17	5	3	19	0	24	4	5	15	10
28	2	17	33	46	3	3	48	32	3	19	31	51	4	5	46	37
29	2	18	5	13	3	4	19	59	3	20	3	18	4	6	18	4
30	2	18	36	39	3	4	51	25	3	20	34	44	4	6	49	30
31	2	19	8	6					3	21	6	11	4	7	20	57
Motus Aphelie				0 29												
Motus Nodi				0 16												

MEDIVS MOTVS MARTIS
AD DIES MENSIVM.

	SEPTEMB.	OCTOBRIS	NOVEMB.	DECEMB.
Die Men- fis.	Medius Motus Martis.	Medius Motus Martis.	Medius Motus Martis.	Medius Motus Martis.
	S O I //	S O I //	S O I //	S O I //
1	4 7 52 25	4 23 35 44	5 9 50 31	5 25 33 50
2	4 8 23 51	4 24 7 11	5 10 21 57	5 26 5 17
3	4 8 55 18	4 24 38 38	5 10 53 24	5 26 36 44
4	4 9 26 45	4 25 10 4	5 11 24 51	5 27 8 10
5	4 9 58 11	4 25 41 31	5 11 56 17	5 27 39 37
6	4 10 29 38	4 26 12 58	5 12 27 44	5 28 11 4
7	4 11 1 5	4 26 44 24	5 12 59 11	5 28 42 30
8	4 11 32 31	4 27 15 51	5 13 30 37	5 29 13 57
9	4 12 3 58	4 27 47 18	5 14 2 4	5 29 45 23
10	4 12 35 25	4 28 18 44	5 14 33 30	6 0 16 50
11	4 13 6 51	4 28 50 11	5 15 4 57	6 0 48 17
12	4 13 38 18	4 29 21 38	5 15 36 24	6 1 19 43
13	4 14 9 45	4 29 53 4	5 16 7 50	6 1 51 10
14	4 14 41 11	5 0 24 31	5 16 39 17	6 2 22 37
15	4 15 12 38	5 0 55 57	5 17 10 43	6 2 54 3
16	4 15 44 4	5 1 27 24	5 17 42 10	6 3 25 30
17	4 16 15 31	5 1 58 51	5 18 13 37	6 3 56 57
18	4 16 46 58	5 2 30 17	5 18 45 4	6 4 28 23
19	4 17 18 24	5 3 1 44	5 19 16 30	6 4 59 50
20	4 17 49 51	5 3 33 11	5 19 47 57	6 5 31 17
21	4 18 21 18	5 4 4 37	5 20 19 24	6 6 2 43
22	4 18 52 44	5 4 36 4	5 20 50 50	6 6 34 10
23	4 19 24 11	5 5 7 31	5 21 22 17	6 7 5 37
24	4 19 55 38	5 5 38 57	5 21 53 44	6 7 37 3
25	4 20 27 4	5 6 10 24	5 22 25 10	6 8 8 30
26	4 20 58 31	5 6 41 51	5 22 56 37	6 8 39 57
27	4 21 29 58	5 7 13 17	5 23 28 4	6 9 11 23
28	4 22 1 24	5 7 44 44	5 23 59 30	6 9 42 50
29	4 22 32 51	5 8 16 11	5 24 30 57	6 10 14 17
30	4 23 4 18	5 8 47 37	5 25 2 24	6 10 45 43
31		5 9 19 4		6 11 17 10
Motus Aphelii	0 53	0 58	1 4	1 10
Motus Nodi	0 28	0 32	0 35	0 38

MEDII MOTUS MARTIS AB AEQUINOCTIO.

IN ANNORUM CENTURIIS.

IN HORIS ET MIN.

Annis Julian. Collect.	Medius Motus Martis.				Motus Aphel. Martis.				Motus Nodi Martis.				Medius Motus Martis.							
	S	O	I	II	S	O	I	II	S	O	I	II	II	II	III	III	II	II	III	III
100	2	1	42	20	0	1	56	40	0	1	3	20	I	0	1	19	31	0	40	37
200	4	3	24	40	0	3	53	20	0	2	6	40	2	0	2	37	32	0	41	56
300	6	5	7	0	0	5	50	0	0	3	10	0	3	0	3	56	33	0	43	14
400	8	6	49	20	0	7	46	40	0	4	13	20	4	0	5	14	34	0	44	33
500	10	8	31	40	0	9	43	20	0	5	16	40	5	0	6	33	35	0	45	51
600	0	10	14	0	0	11	40	0	0	6	20	0	6	0	7	52	36	0	47	10
700	2	11	56	20	0	13	36	40	0	7	23	20	7	0	9	10	37	0	48	29
800	4	13	38	40	0	15	33	20	0	8	26	40	8	0	10	29	38	0	49	47
900	6	15	21	0	0	17	30	0	0	9	30	0	9	0	11	48	39	0	51	6
1000	8	17	3	20	0	19	26	40	0	10	33	20	10	0	13	6	40	0	52	24
1100	10	18	45	40	0	21	23	20	0	11	36	40	11	0	14	25	41	0	53	43
1200	0	20	28	0	0	23	20	0	0	12	40	0	12	0	15	43	42	0	55	2
1300	2	22	10	20	0	25	16	40	0	13	43	20	13	0	17	2	43	0	56	20
1400	4	23	52	40	0	27	13	20	0	14	46	40	14	0	18	21	44	0	57	39
1500	6	25	35	0	0	29	10	0	0	15	50	0	15	0	19	39	45	0	58	58
1600	8	27	17	20	I	1	6	40	0	16	53	20	16	0	20	58	46	I	0	16
1700	10	28	59	40	I	3	3	20	0	17	56	40	17	0	22	16	47	I	1	35
1800	1	0	42	0	I	5	0	0	0	19	0	0	19	0	23	35	48	I	2	53
1900	3	2	24	20	I	6	56	40	0	20	3	20	20	0	24	54	49	I	4	12
2000	5	4	6	40	I	8	53	20	0	21	6	40	21	0	26	12	50	I	5	31
2100	7	5	49	0	I	10	50	0	0	22	10	0	22	0	27	31	51	I	6	49
2200	9	7	31	20	I	12	46	40	0	23	13	20	23	0	28	49	52	I	8	8
2300	11	9	13	40	I	14	43	20	0	24	16	40	24	0	30	8	53	I	9	26
2400	1	10	56	0	I	16	40	0	0	25	20	0	25	0	31	27	54	I	10	45
2500	3	12	38	20	I	18	36	40	0	26	23	20	26	0	32	45	55	I	12	4
2600	5	14	20	40	I	20	33	20	0	27	26	40	27	0	34	4	56	I	13	22
2700	7	16	3	0	I	22	30	0	0	28	30	0	28	0	35	22	57	I	14	41
2800	9	17	45	20	I	24	26	40	0	29	33	20	29	0	36	41	58	I	15	59
2900	11	19	27	40	I	26	23	20	I	0	36	40	30	0	38	0	59	I	17	18
3000	1	21	10	0	I	28	20	0	I	1	40	0	30	0	39	18	60	I	18	37
3100	3	22	52	20	2	0	16	40	I	2	43	20	30	0	39	18	60	I	18	37
3200	5	24	34	40	2	2	13	20	I	3	46	40								

TABULA EQUATIONUM MARTIS.

Anomalia media Martis.

Gr.	Sig. o. Subtr.			Diffe- rentia		Gr.	Sig. I. Subtr.			Diffe- rentia.		Gr.	Sig. II. Subtr.			Diffe- rentia.		Gr.
	o	i	ii	i	ii		o	i	ii	i	ii		o	i	ii	i	ii	
0	0	0	0				4	50	1				8	41	16			30
1	0	10	0	10	0		4	59	0	8	59		8	47	17	6	1	29
2	0	19	59	9	59		5	7	55	8	55		8	53	10	5	53	28
3	0	29	58	9	59		5	16	46	8	51		8	58	54	5	44	27
4	0	39	57	9	59		5	25	32	8	46		9	4	30	5	36	26
5	0	49	55	9	58		5	34	14	8	42		9	9	58	5	28	25
6	0	59	53	9	58					8	37					5	20	
7	1	9	50	9	57		5	42	51	8	33		9	15	18	5	11	24
8	1	19	46	9	56		5	51	24	8	28		9	20	29	5	2	23
9	1	29	41	9	55		5	59	52	8	23		9	25	31	5	2	22
10	1	39	35	9	54		6	8	15	8	18		9	30	24	4	53	21
11	1	49	27	9	52		6	16	33	8	12		9	35	9	4	45	20
12	1	59	18	9	51											4	36	
13	2	9	7	9	49		6	24	45	8	7		9	39	45	4	26	19
14	2	18	55	9	48		6	32	52	8	1		9	44	11	4	17	18
15	2	28	41	9	46		6	40	53	7	56		9	48	28	4	8	17
16	2	38	25	9	44		6	48	49	7	51		9	52	36	3	58	16
17	2	48	7	9	42		6	56	40	7	45		9	56	34	3	48	15
18	2	57	46	9	39					7	39		10	0	22	3	38	14
19	3	7	23	9	37		7	4	25	7	32		10	4	0	3	29	13
20	3	16	59	9	36		7	12	4	7	26		10	7	29	3	19	12
21	3	26	31	9	32		7	19	36	7	20		10	10	48	3	9	11
22	3	36	0	9	29		7	27	2	7	13		10	13	57	2	58	10
23	3	45	27	9	27											2	48	
24	3	54	50	9	23		7	41	35	7	6		10	16	55	2	38	9
25	4	4	10	9	20		7	48	41	6	59		10	19	43	2	28	8
26	4	13	28	9	18		7	55	40	6	53		10	22	21	2	28	7
27	4	22	42	9	14		8	2	33	6	45		10	24	49	2	17	6
28	4	31	52	9	10		8	9	18	6	39		10	27	6	2	6	5
29	4	40	58	9	6													
30	4	50	1	9	3		8	15	57	6	31		10	29	12	1	55	4
							8	22	28	6	23		10	31	7	1	44	3
							8	28	52	6	16		10	32	51	1	33	2
							8	35	8	6	8		10	34	24	1	22	1
							8	41	16				10	35	46			0
	Sig. XI. Adde.			Diff.			Sig. X. Adde.			Diff.			Sig. IX. Adde.			Diff.		Gr.

TABULA AEQUATIONUM MARTIS.

Anomalia media Martis.

Gr.	Sig. III. Subtr.			Diffe- rentia.		Sig. IV. Subtr.			Diffe- rentia.		Sig. V. Subtr.			Diffe- rentia		
	0	1	11			0	1	11			0	1	11			
0	10	35	46			9	44	59			5	54	42			30
1	10	36	57	1	11				4	52				10	22	29
2	10	37	57	1	0	9	40	7	5	5	5	44	20	10	30	28
3	10	38	45	0	48	9	35	2	5	17	5	33	50	10	39	27
4	10	39	21	0	36	9	29	45	5	29	5	23	11	10	47	26
5	10	39	46	0	25	9	24	16	5	42	5	12	24	10	55	25
				0	14	9	18	34				1	29	11	2	
6	10	40	0	0	2	9	12	40	6	5	4	50	27	11	9	24
7	10	40	2			9	6	35	6	17	4	39	18	11	16	23
8	10	39	52	0	10	9	0	18	6	28	4	28	2	11	23	22
9	10	39	30	0	22	8	53	50	6	40	4	16	39	11	29	21
10	10	38	57	0	33	8	47	10	6	53	4	5	10	11	36	20
				0	45				7	6	3	53	34	11	42	19
11	10	38	12	0	58	8	33	11	7	16	3	41	52	11	47	18
12	10	37	14	1	10	8	25	55	7	28	3	30	5	11	54	17
13	10	36	4	1	21	8	18	27	7	40	3	18	11	11	58	16
14	10	34	43	1	34	8	10	47	7	51	3	6	13	12	2	15
15	10	33	9	1	47				8	3	2	54	11	12	7	14
16	10	31	22	1	58	7	54	53	8	13	2	42	4	12	13	13
17	10	29	24	2	10	7	46	40	8	24	2	29	51	12	16	12
18	10	27	14	2	23	7	38	16	8	34	2	17	35	12	19	11
19	10	24	51	2	36	7	29	42	8	45	2	5	16	12	22	10
20	10	22	15	2	48				7	20	1	52	54	12	25	9
				2		7	12	2	8	55	1	40	29	12	27	8
21	10	19	27	3	0	7	2	56	9	6	1	28	2	12	30	7
22	10	16	27	3	12	6	53	39	9	17	1	15	32	12	32	6
23	10	13	15	3	25	6	44	13	9	26	1	3	0	12	34	5
24	10	9	50	3	37				9	35	0	50	26	12	35	4
25	10	6	13	3	50	6	34	38	9	45	0	37	51	12	37	3
				3		6	14	58	9	55	0	25	14	12	37	2
26	10	2	23	4	2	6	4	54	10	4	0	12	37	12	37	1
27	9	58	21	4	15	5	54	42	10	12	0	0	0	12	37	0
28	9	54	6	4	27											
29	9	49	39	4	40											
30	9	44	59	4												
	Sig. VIII. Adde.			Diff.		Sig. VII. Adde.			Diff.		Sig. VI. Adde.			Diff		Gr.

LOGARITHMI DISTANTIARUM MARTIS A SOLE.

Anomalia media Martis.

Gr.	Sig. o. Logar.	Diffe- rentia.	Sig. I. Logar.	Diffe- rentia.	Sig. II. Logar.	Diffe- rentia.	
0	5 221516		5 217310		5 205134		30
1	5 221511	5	5 217027	283	5 204606	528	29
2	5 221497	14	5 216735	292	5 204070	536	28
3	5 221473	24	5 216435	300	5 203527	543	27
4	5 221441	32	5 216126	309	5 202977	550	26
5	5 221398	43	5 215808	318	5 202421	556	25
6	5 221346	52	5 215481	327	5 201857	564	24
7	5 221285	61	5 215145	336	5 201287	570	23
8	5 221215	70	5 214801	344	5 200711	576	22
9	5 221135	80	5 214448	353	5 200128	583	21
10	5 221046	89	5 214087	361	5 199538	590	20
11	5 220947	99	5 213717	370	5 198942	596	19
12	5 220839	108	5 213338	379	5 198340	602	18
13	5 220721	118	5 212951	387	5 197732	608	17
14	5 220594	127	5 212556	395	5 197118	614	16
15	5 220458	136	5 212152	404	5 196499	619	15
16	5 220313	145	5 211740	412	5 195874	625	14
17	5 220158	155	5 211319	421	5 195244	630	13
18	5 219994	164	5 210890	429	5 194608	636	12
19	5 219821	173	5 210453	437	5 193967	641	11
20	5 219639	182	5 210009	444	5 193322	645	10
21	5 219447	192	5 209556	453	5 192671	651	9
22	5 219245	202	5 209095	461	5 192015	656	8
23	5 219035	210	5 208627	468	5 191355	660	7
24	5 218817	218	5 208152	475	5 190690	665	6
25	5 218588	229	5 207668	484	5 190021	669	5
26	5 218351	237	5 207175	493	5 189347	674	4
27	5 218104	247	5 206674	501	5 188670	677	3
28	5 217848	256	5 206167	507	5 187989	681	2
29	5 217583	265	5 205654	513	5 187304	685	1
30	5 217310	273	5 205134	520	5 186615	689	0
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARUM MARTIS A SOLE.

Anomalia media Martis.

Gr.	Sig. III. Logar.	Diffe- rentia.	Sig. IV. Logar.	Diffe- rentia.	Sig. V. Logar.	Diffe- rentia.	
0	5 186615		5 165366		5 147586		30
		691		690		444	
1	5 185924	695	5 164676	686	5 147142	432	29
2	5 185229	698	5 163990	681	5 146710	419	28
3	5 184531	700	5 163309	677	5 146291	406	27
4	5 183831	703	5 162632	672	5 145885	393	26
5	5 183128	705	5 161960	667	5 145492	379	25
		707		662		366	24
6	5 182423	710	5 161293	656	5 145113	352	23
7	5 181716	711	5 160631	650	5 144747	338	22
8	5 181006	713	5 159975	643	5 144395	323	21
9	5 180295	714	5 159325	637	5 144057	309	20
10	5 179582	715	5 158682	630	5 143734	294	19
		716		623		279	18
11	5 178868	716	5 158045	615	5 143425	265	17
12	5 178153	717	5 157415	607	5 143131	249	16
13	5 177437	717	5 156792	599	5 142852	234	15
14	5 176721	717	5 156177	591	5 142587	218	14
15	5 176004	717	5 155570	583	5 142338	203	13
		716		574		187	12
16	5 175287	716	5 154971	564	5 142104	171	11
17	5 174570	715	5 154380	555	5 141886	155	10
18	5 173853	714	5 153797	545	5 141683	139	9
19	5 173137	714	5 153223	535	5 141496	123	8
20	5 172421	714	5 152659	524	5 141325	107	7
		714		514		90	6
21	5 171706	714	5 152104	503	5 141170	74	5
22	5 170992	714	5 151559	492	5 141031	58	4
23	5 170281	714	5 151024	480	5 140801	41	3
24	5 169572	714	5 150500	468	5 140711	25	2
25	5 168865	714	5 149986	457	5 140637	8	1
		714			5 140579		0
26	5 168160	714	5 149483		5 140538		
27	5 167457	714	5 148991		5 140513		
28	5 166756	714	5 148511		5 140505		
29	5 166058	714	5 148043				
30	5 165366	714	5 147586				
	Sig. VIII.	Diff.	Sig. VII.	Diff.	Sig. VI.	Diff.	Gr.

TABULA LATITUDINARIA MARTIS.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor.			Subtr.		Cur- tatio	Sig. 1. Bor.			Subtr.		Cur- tatio	Sig. 2. Bor.			Subtr.		Cur- tatio	
	Sig. 6. Auf.			Subtr.			Sig. 7. Auf.			Subtr.			Sig. 8. Auf.			Subtr.			
	Inclinatio.			Reduct.			Inclinatio.			Reduct.			Inclinatio.			Reduct.			
Gr.	o	i	ii	i	ii	Log	o	i	ii	i	ii	Log	o	i	ii	i	ii	Log	
0	0	0	0	0	0	0	0	55	29	0	47	56	1	36	8	0	47	170	30
1	0	1	56	0	2	0	0	57	10	0	48	60	1	37	5	0	46	173	29
2	0	3	53	0	4	0	0	58	49	0	49	64	1	38	0	0	45	176	28
3	0	5	48	0	6	1	1	0	27	0	49	67	1	38	54	0	44	180	27
4	0	7	44	0	7	1	1	2	4	0	50	71	1	39	46	0	43	183	26
5	0	9	40	0	9	2	1	3	40	0	51	74	1	40	36	0	41	186	25
6	0	11	36	0	11	2	1	5	14	0	51	78	1	41	24	0	40	189	24
7	0	13	32	0	13	3	1	6	48	0	52	82	1	42	10	0	39	192	23
8	0	15	27	0	15	4	1	8	20	0	52	86	1	42	55	0	37	195	22
9	0	17	22	0	17	5	1	9	51	0	53	90	1	43	38	0	36	197	21
10	0	19	16	0	18	7	1	11	20	0	53	93	1	44	18	0	35	200	20
11	0	21	10	0	20	8	1	12	49	0	53	97	1	44	57	0	33	202	19
12	0	23	4	0	22	10	1	14	16	0	54	101	1	45	34	0	32	205	18
13	0	24	58	0	24	11	1	15	42	0	54	105	1	46	9	0	30	207	17
14	0	26	51	0	25	13	1	17	6	0	54	109	1	46	42	0	29	209	16
15	0	28	43	0	27	15	1	18	29	0	54	113	1	47	13	0	27	211	15
16	0	30	35	0	29	17	1	19	50	0	54	117	1	47	42	0	25	213	14
17	0	32	27	0	30	19	1	21	10	0	54	121	1	48	9	0	24	215	13
18	0	34	18	0	32	22	1	22	29	0	54	125	1	48	35	0	22	217	12
19	0	36	8	0	33	24	1	23	46	0	53	129	1	48	58	0	20	218	11
20	0	37	57	0	35	27	1	25	1	0	53	133	1	49	19	0	18	220	10
21	0	39	46	0	36	29	1	26	15	0	53	137	1	49	38	0	17	221	9
22	0	41	34	0	37	32	1	27	28	0	52	141	1	49	55	0	15	222	8
23	0	43	22	0	39	34	1	28	38	0	52	144	1	50	10	0	13	223	7
24	0	45	8	0	40	37	1	29	48	0	51	148	1	50	23	0	11	224	6
25	0	46	54	0	41	40	1	30	55	0	51	152	1	50	35	0	9	225	5
26	0	48	39	0	43	43	1	32	1	0	50	155	1	50	44	0	7	225	4
27	0	50	23	0	44	47	1	33	5	0	49	159	1	50	51	0	6	226	3
28	0	52	6	0	45	50	1	34	7	0	49	163	1	50	56	0	4	226	2
29	0	53	48	0	46	53	1	35	8	0	48	166	1	50	59	0	2	226	1
30	0	55	29	0	47	56	1	36	8	0	47	170	1	51	0	0	0	226	0
	Sig. 11. Auf.			Adde.			Sig. 10. Auf.			Adde.			Sig. 9. Auf.			Adde.			
	Sig. 5. Bor.			Adde.			Sig. 4. Bor.			Adde.			Sig. 3. Bor.			Adde.			Gr.

SERIES OPPOSITIONUM SOLIS ET MARTIS
NOSTRA ÆTATE FACTARUM CUM
COMPUTO PRÆCEDENTE COLLATA.

Oppositionum Tempora æquata Londini.				Locus Solis verus.			Anom. med. Martis.				Mars Heliocen- tricus comp.			Error Comp.	
D. H. /				° ' "			S ° ' "				° ' "			' "	
1657	Sept.	27	11 11	♈	15	3 36	7	8	5 51	♈	15	3 36	*	*	
1659	Nov.	21	11 33	♉	9	51 2	8	29	27 36	♉	9	49 56	-1	6	
1661	Dec.	30	6 0	♊	19	52 14	10	12	49 57	♊	19	51 32	-0	42	
1664	Feb.	2	18 33	♋	24	24 31	11	23	27 22	♋	24	24 31	*	*	
1666	Mart.	8	12 6	♌	28	39 49	1	4	11 21	♌	28	38 57	-0	52	
1668	Apr.	16	19 5	♍	7	39 52	2	17	50 8	♍	7	39 51	*	*	
1670	Jun.	11	15 38	♎	0	46 42	4	9	38 20	♎	0	46 43	+0	1	
1672	Aug.	29	11 24	♏	16	56 4	6	14	0 1	♏	16	56 26	+0	22	
1674	Nov.	2	16 52	♐	21	11 32	8	10	42 53	♐	21	10 51	-0	41	
1676	Dec.	15	19 5	♑	5	29 55	9	26	21 11	♑	5	29 36	-0	19	
1679	Jan.	20	14 50	♒	11	27 59	11	7	39 29	♒	11	27 27	-0	32	
1681	Feb.	22	16 18	♓	15	16 16	0	18	2 25	♓	15	16 21	+0	5	
1683	Mart.	31	23 31	♈	21	39 18	2	0	7 10	♈	21	39 41	+0	23	
1685	Maii	18	1 0	♉	7	38 15	3	17	50 19	♉	7	38 23	+0	8	
1687	Jul.	29	1 0	♊	15	56 5	5	18	6 1	♊	15	56 11	+0	6	
1689	Oct.	11	17 20	♋	29	28 52	7	20	17 29	♋	29	28 34	-0	18	
1691	Dec.	1	3 6	♌	19	53 50	9	9	14 56	♌	19	53 36	-0	14	
1694	Jan.	7	4 47	♍	28	11 52	10	21	43 18	♍	28	11 17	-0	35	
1696	Feb.	10	9 0	♎	2	18 4	0	2	38 37	♎	2	17 27	-0	37	
1698	Mart.	16	18 20	♏	7	4 17	1	13	14 27	♏	7	3 47	-0	30	
1700	Apr.	27	7 40	♐	18	5 16	2	28	4 28	♐	18	5 10	-0	6	
1702	Jun.	27	12 50	♑	16	10 10	4	22	41 8	♑	16	10 46	+0	36	
1704	Sept.	15	9 54	♒	3	45 46	6	27	36 0	♒	3	45 18	-0	28	
1706	Nov.	13	16 23	♓	2	32 1	8	21	11 33	♓	2	32 1	*	*	
1708	Dec.	24	4 48	♈	14	18 4	10	5	28 51	♈	14	18 4	*	*	
1711	Jan.	28	5 22	♉	19	24 6	11	16	22 2	♉	19	23 40	-0	26	
1713	Mart.	2	12 54	♊	23	20 30	0	26	52 53	♊	23	20 50	+0	20	
1715	Apr.	10	8 46	♋	1	3 19	2	9	45 40	♋	1	3 19	*	*	
1717	Maii	31	9 20	♌	20	38 46	3	29	33 21	♌	20	39 7	+0	21	
1719	Aug.	16	11 41	♍	3	57 30	6	2	29 22	♍	3	57 30	*	*	

Oppositiones quibus Nota * * apponitur, ob defectum accuratarum Observationum,
ex nostro Calculo supplevimus.

EPOCHÆ MEDIORUM MOTUUM JOVIS.

Annis Juli- anis ineun- tibus.	Jupiter ab Æquinoct.				Aphel. $\propto$ ☐ 8°		Nod. $\propto$ ☉ 7°		Annis Juli- anis ineun- tibus.	Jupiter ab Æquinoct.				Aphel. $\propto$ ☐ 9°		Nod. $\propto$ ☉ 7°		
	S	O	I	II	O	I	II	I		II	S	O	I	II	O	I	II	I
1661	6	2	33	57	47	0	1	40	1696	5	15	16	4	29	0	30	50	
62	7	2	54	35	48	12	2	30	97	6	15	41	41	30	12	31	40	
63	8	3	15	13	49	24	3	20	98	7	16	2	20	31	24	32	30	
64	9	3	35	51	50	36	4	10	99	8	16	22	58	32	36	33	20	
1665	10	4	1	29	51	48	5	0	1700	9	16	43	36	33	48	34	10	
1666	11	4	22	7	53	0	5	50	1701	10	17	9	13	35	0	35	0	
67	0	4	42	45	54	12	6	40	2	11	17	29	51	36	12	35	50	
68	1	5	3	23	55	24	7	30	3	0	17	50	29	37	24	36	40	
69	2	5	29	0	56	36	8	20	4	1	18	11	7	38	36	37	30	
1670	3	5	49	38	57	48	9	10	1705	2	18	36	45	39	48	38	20	
1671	4	6	10	16	59	0	10	0	1706	3	18	57	23	41	0	39	10	
72	5	6	30	54	9	0	12	10	7	4	19	18	1	42	12	40	0	
73	6	6	56	32	☐ 1	24	11	40	8	5	19	38	39	43	24	40	50	
74	7	7	17	10	2	36	12	30	9	6	20	4	16	44	36	41	40	
1675	8	7	37	48	3	48	13	20	1710	7	20	24	54	45	48	42	30	
1676	9	7	58	26	5	0	14	10	1711	8	20	45	32	47	0	43	20	
77	10	8	24	3	6	12	15	0	12	9	21	6	10	48	12	44	10	
78	11	8	44	42	7	24	15	50	13	10	21	31	48	49	24	45	0	
79	0	9	5	20	8	36	16	40	14	11	21	52	26	50	36	45	50	
1680	1	9	25	58	9	48	17	30	1715	0	22	13	4	51	48	46	40	
1681	2	9	51	35	11	0	18	20	1716	1	22	33	42	53	0	47	30	
82	3	10	12	13	12	12	19	10	17	2	22	59	19	54	12	48	20	
83	4	10	32	51	13	24	20	0	18	3	23	19	57	55	24	49	10	
84	5	10	53	29	14	36	20	50	19	4	23	40	36	56	36	50	0	
1685	6	11	19	7	15	48	21	40	1720	5	24	1	13	57	48	50	50	
1686	7	11	39	45	17	0	22	30	1721	6	24	26	51	59	0	51	40	
87	8	12	0	23	18	12	23	20	22	7	24	47	29	10	0	12	52	30
88	9	12	21	1	19	24	24	10	23	8	25	8	7	☐ 1	24	53	20	
89	10	12	46	38	20	36	25	0	24	9	25	28	45	2	36	54	10	
1690	11	13	7	16	21	48	25	50	1725	10	25	54	23	3	48	55	0	
1691	0	13	27	54	23	0	26	40	1726	11	26	15	1	5	0	55	50	
92	1	13	48	32	24	12	27	30	27	0	26	35	39	6	12	56	40	
93	2	14	14	10	25	24	28	20	28	1	26	56	17	7	24	57	30	
94	3	14	34	48	26	36	29	10	29	2	27	21	54	8	36	58	20	
1695	4	14	55	26	27	48	30	0	1730	3	27	42	32	9	48	59	10	

EPOCHÆ MEDIORUM MOTUUM JOVIS.

Annis Juli- anis ineun- tibus.	Jupiter ab Æquinoct.				Aph. ♄		Nod. ♄		Annis Juli- anis ineun- tibus.	Jupiter ab Æquinoct.				Aphel. ♄		Nod. ♄	
	S	O	I	II	I	II	I	II		S	O	I	II	I	II	I	II
1731	4	28	3	10	11	0	0	0	1766	4	10	50	18	53	0	29	10
32	5	28	23	48	12	12	0	50	67	5	11	10	56	54	12	30	0
33	6	28	49	26	13	24	1	40	68	6	11	31	34	55	24	30	50
34	7	29	10	4	14	36	2	30	69	7	11	57	11	56	36	31	40
1735	8	29	30	42	15	48	3	20	1770	8	12	17	49	57	48	32	30
1736	9	29	51	20	17	0	4	10	1771	9	12	38	27	59	0	33	20
37	11	0	16	57	18	12	5	0	72	10	12	59	5	11	0	12	34
38	0	0	37	36	19	24	5	50	73	11	13	24	43	12	1	24	35
39	1	0	58	14	20	36	6	40	74	0	13	45	21	2	36	35	50
1740	2	1	18	52	21	48	7	30	1775	1	14	5	59	3	48	36	40
1741	3	1	44	29	23	0	8	20	1776	2	14	26	37	5	0	37	30
42	4	2	5	7	24	12	9	10	77	3	14	52	14	6	12	38	20
43	5	2	25	45	25	24	10	0	78	4	15	12	53	7	24	39	10
44	6	2	46	23	26	36	10	50	79	5	15	33	31	8	36	40	0
1745	7	3	12	1	27	48	11	40	1780	6	15	54	9	9	48	40	50
1746	8	3	32	39	29	0	12	30	1781	7	16	19	46	11	0	41	40
47	9	3	53	18	30	12	13	20	82	8	16	40	24	12	12	42	30
48	10	4	13	56	31	24	14	10	83	9	17	1	2	13	24	43	20
49	11	4	39	33	32	36	15	0	84	10	17	21	40	14	36	44	10
1750	0	5	0	11	33	48	15	50	1785	11	17	47	18	15	48	45	0
1751	1	5	20	49	35	0	16	40	1786	0	18	7	56	17	0	45	50
52	2	5	41	27	36	12	17	30	87	1	18	28	34	18	12	46	40
53	3	6	7	5	37	24	18	20	88	2	18	49	12	19	24	47	30
54	4	6	27	43	38	36	19	10	89	3	19	14	49	20	36	48	20
1755	5	6	48	21	39	48	20	0	1790	4	19	35	27	21	48	49	10
1756	6	7	8	59	41	0	20	50	1791	5	19	56	5	23	0	50	0
57	7	7	34	36	42	12	21	40	92	6	20	16	43	24	12	50	50
58	8	7	55	15	43	24	22	30	93	7	20	42	21	25	24	51	40
59	9	8	15	53	44	36	23	20	94	8	21	2	59	26	36	52	30
1760	10	8	36	31	45	48	24	10	1795	9	21	23	37	27	48	53	20
1761	11	9	2	8	47	0	25	0	1796	10	21	44	15	29	0	54	10
62	0	9	22	46	48	12	25	50	97	11	22	9	52	30	12	55	0
63	1	9	43	24	49	24	26	40	98	0	22	30	31	31	24	55	50
64	2	10	4	2	50	36	27	30	99	1	22	51	9	32	36	56	40
1765	3	10	29	40	51	48	28	20	1800	2	23	11	47	33	48	57	30

*M E D I U S M O T U S J O V I S
A D D I E S M E N S I U M.*

	JANUAR.	FEBRUA.	MARTII	APRILIS	MAII	JUNII
<i>Die Men- fis.</i>	<i>Med. Mot. Jovis.</i>	<i>Med. Mot. Jovis.</i>	<i>Med. Mot. Jovis.</i>	<i>Med. Mot. Jovis.</i>	<i>Med. Mot. Jovis.</i>	<i>Med. Mot. Jovis.</i>
	o / //	o / //	o / //	o / //	o / //	o / //
1	o 4 59	2 39 37	4 59 17	7 33 55	10 3 33	12 38 11
2	o 9 59	2 44 36	5 4 16	7 38 54	10 8 33	12 43 10
3	o 14 58	2 49 36	5 9 16	7 43 53	10 13 32	12 48 10
4	o 19 57	2 54 35	5 14 15	7 48 53	10 18 31	12 53 9
5	o 24 56	2 59 34	5 19 14	7 53 52	10 23 30	12 58 8
6	o 29 56	3 4 33	5 24 13	7 58 51	10 28 30	13 3 7
7	o 34 55	3 9 33	5 29 13	8 3 50	10 33 29	13 8 7
8	o 39 54	3 14 32	5 34 12	8 8 50	10 38 28	13 13 6
9	o 44 54	3 19 31	5 39 11	8 13 49	10 43 28	13 18 5
10	o 49 53	3 24 31	5 44 11	8 18 48	10 48 27	13 23 5
11	o 54 52	3 29 30	5 49 10	8 23 48	10 53 26	13 28 4
12	o 59 51	3 34 29	5 54 9	8 28 47	10 58 25	13 33 3
13	1 4 51	3 39 28	5 59 8	8 33 46	11 3 25	13 38 2
14	1 9 50	3 44 28	6 4 8	8 38 45	11 8 24	13 43 2
15	1 14 49	3 49 27	6 9 7	8 43 45	11 13 23	13 48 1
16	1 19 49	3 54 26	6 14 6	8 48 44	11 18 23	13 53 0
17	1 24 48	3 59 26	6 19 6	8 53 43	11 23 22	13 58 0
18	1 29 47	4 4 25	6 24 5	8 58 43	11 28 21	14 2 59
19	1 34 46	4 9 24	6 29 4	9 3 42	11 33 20	14 7 58
20	1 39 46	4 14 23	6 34 3	9 8 41	11 38 20	14 12 57
21	1 44 45	4 19 23	6 39 3	9 13 40	11 43 19	14 17 57
22	1 49 44	4 24 22	6 44 2	9 18 40	11 48 18	14 22 56
23	1 54 44	4 29 21	6 49 1	9 23 39	11 53 18	14 27 55
24	1 59 43	4 34 21	6 54 1	9 28 38	11 58 17	14 32 55
25	2 4 42	4 39 20	6 59 0	9 33 38	12 3 16	14 37 54
26	2 9 41	4 44 19	7 3 59	9 38 37	12 8 15	14 42 53
27	2 14 41	4 49 18	7 8 58	9 43 36	12 13 15	14 47 52
28	2 19 40	4 54 18	7 13 58	9 48 35	12 18 14	14 52 52
29	2 24 39	<i>In Anno Bis- sextili post Fe- bruarium adde unius diei mo- rum.</i>	7 18 57	9 53 35	12 23 13	14 57 51
30	2 29 38		7 23 56	9 58 34	12 28 12	15 2 50
31	2 34 38		7 28 55	/ //	12 33 12	/ //
<i>Mot. Aphel.</i>	o 6	o 12	o 18	o 24	o 30	o 36
<i>Mot. Nodi</i>	o 4	o 8	o 12	o 16	o 21	o 25

MEDIUS MOTUS JOVIS
AD DIES MENSIVM.

	JULII	AUGUST.	SEPTEM.	OCTOB.	NOVEM.	DECEMB.
Die Men fis.	Med. Mot. Jovis.	Med. Mot. Jovis.	Med. Mot. Jovis.	Med. Mot. Jovis.	Med. Mot. Jovis.	Med. Mot. Jovis.
	o / //	o / //	o / //	o / //	o / //	o / //
1	15 7 50	17 42 27	20 17 5	22 46 44	25 21 21	27 51 0
2	15 12 49	17 47 27	20 22 4	22 51 43	25 26 21	27 55 59
3	15 17 48	17 52 26	20 27 4	22 56 42	25 31 20	28 0 58
4	15 22 47	17 57 25	20 32 3	23 1 41	25 36 19	28 5 58
5	15 27 47	18 2 24	20 37 2	23 6 41	25 41 19	28 10 57
6	15 32 46	18 7 24	20 42 2	23 11 40	25 46 18	28 15 56
7	15 37 45	18 12 23	20 47 1	23 16 39	25 51 17	28 20 56
8	15 42 45	18 17 22	20 52 0	23 21 39	25 56 16	28 25 55
9	15 47 44	18 22 22	20 56 59	23 26 38	26 1 16	28 30 54
10	15 52 43	18 27 21	21 1 59	23 31 37	26 6 15	28 35 53
11	15 57 42	18 32 20	21 6 58	23 36 36	26 11 14	28 40 53
12	16 2 42	18 37 19	21 11 57	23 41 36	26 16 14	28 45 52
13	16 7 41	18 42 19	21 16 57	23 46 35	26 21 13	28 50 51
14	16 12 40	18 47 18	21 21 56	23 51 34	26 26 12	28 55 51
15	16 17 40	18 52 17	21 26 55	23 56 34	26 31 11	29 0 50
16	16 22 39	18 57 17	21 31 54	24 1 33	26 36 11	29 5 49
17	16 27 38	19 2 16	21 36 54	24 6 32	26 41 10	29 10 48
18	16 32 37	19 7 15	21 41 53	24 11 31	26 46 9	29 15 48
19	16 37 37	19 12 14	21 46 52	24 16 31	26 51 9	29 20 47
20	16 42 36	19 17 14	21 51 52	24 21 30	26 56 8	29 25 46
21	16 47 35	19 22 13	21 56 51	24 26 29	27 1 7	29 30 46
22	16 52 35	19 27 12	22 1 50	24 31 29	27 6 6	29 35 45
23	16 57 34	19 32 12	22 6 49	24 36 28	27 11 6	29 40 44
24	17 2 33	19 37 11	22 11 49	24 41 27	27 16 5	29 45 43
25	17 7 32	19 42 10	22 16 48	24 46 26	27 21 4	29 50 43
26	17 12 32	19 47 9	22 21 47	24 51 26	27 26 3	29 55 42
27	17 17 31	19 52 9	22 26 46	24 56 25	27 31 3	30 0 41
28	17 22 30	19 57 8	22 31 46	25 1 24	27 36 2	30 5 41
29	17 27 29	20 2 7	22 36 45	25 6 24	27 41 1	30 10 40
30	17 32 29	20 7 7	22 41 44	25 11 23	27 46 1	30 15 39
31	17 37 28	20 12 6	/ //	25 16 22	/ //	30 20 38
Mot. Aphel.	o 42	o 48	o 54	1 0	1 6	1 12
Mot. Nodi	o 29	o 33	o 37	o 42	o 46	o 50

MEDII MOTUS JOVIS AB ÆQUINOCTIO.

IN ANNORUM CENTURIIS.

IN HORIS ET MIN.

Annis Julian. Collect.	Medius Motus Jovis.				Æquat. Secula- ris.		Motus Aphelii Jovis.			Motus No- di Jovis.			Medius Motus Jovis.					
	S	O	I	II	O	I	S	O	I	O	I	II	I H	II I	III II	I H	II I	III II
100	5	6	28	11	0	0,6	0	2	0	1	23	20	1	0	12	31	6	26
200	10	12	56	22	0	2,3	0	4	0	2	46	40	2	0	25	32	6	39
300	3	19	24	33	0	5,2	0	6	0	4	10	0	3	0	37	33	6	51
400	8	25	52	44	0	9,2	0	8	0	5	33	20	4	0	50	34	7	4
500	2	2	20	55	0	14,3	0	10	0	6	56	40	5	1	2	35	7	16
600	7	8	49	6	0	20,6	0	12	0	8	20	0	6	1	15	36	7	29
700	0	15	17	17	0	28,1	0	14	0	9	43	20	7	1	27	37	7	42
800	5	21	45	28	0	36,7	0	16	0	11	6	40	8	1	40	38	7	54
900	10	28	13	39	0	46,4	0	18	0	12	30	0	9	1	52	39	8	6
1000	4	4	41	50	0	57,3	0	20	0	13	53	20	10	2	5	40	8	19
1100	9	11	10	1	1	9,4	0	22	0	15	16	40	11	2	17	41	8	31
1200	2	17	38	12	1	22,6	0	24	0	16	40	0	12	2	30	42	8	43
1300	7	24	6	23	1	36,9	0	26	0	18	3	20	13	2	42	43	8	56
1400	1	0	34	34	1	52,4	0	28	0	19	26	40	14	2	54	44	9	8
1500	6	7	2	45	2	9,0	1	0	0	20	50	0	15	3	7	45	9	21
1600	11	13	30	56	2	26,8	1	2	0	22	13	20	16	3	19	46	9	33
1700	4	19	59	7	2	45,7	1	4	0	23	36	40	17	3	32	47	9	46
1800	9	26	27	18	3	5,8	1	6	0	25	0	0	18	3	44	48	9	58
1900	3	2	55	29	3	27,0	1	8	0	26	23	20	19	3	57	49	10	11
2000	8	9	23	40	3	49,4	1	10	0	27	46	40	20	4	9	50	10	23
2100	1	15	51	51	4	12,9	1	12	0	29	10	0	21	4	22	51	10	36
2200	6	22	20	2	4	37,5	1	14	0	30	33	20	22	4	34	52	10	48
2300	11	28	48	13	5	3,3	1	16	0	31	56	40	23	4	47	53	11	1
2400	5	5	16	24	5	30,3	1	18	0	33	20	0	24	4	59	54	11	13
2500	10	11	44	35	5	58,4	1	20	0	34	43	20	25	5	12	55	11	26
2600	3	18	12	46	6	27,7	1	22	0	36	6	40	26	5	24	56	11	38
2700	8	24	40	57	6	58,0	1	24	0	37	30	0	27	5	37	57	11	50
2800	2	1	9	8	7	29,6	1	26	0	38	53	20	28	5	49	58	12	3
2900	7	7	37	19	8	2,0	1	28	0	40	16	40	29	6	1	59	12	15
3000	0	14	5	30	8	36,1	2	0	0	41	40	0	30	6	14	60	12	28

Æquatio Secularis addenda est medio Jovis Motui, tam in Seculis præteritis quam futuris.

TABULA EQUATIONUM JOVIS.

Anomalia media Jovis.

Gr.	Sig. O. Subtr.			Diff.	Sig. I. Subtr.			Diff.	Sig. II. Subtr.			Diff.	
	0	1	11		0	1	11		0	1	11		
0	0	0	0		2	37	29		4	38	22		30
1	0	5	28	5 28	2	42	17	4 48	4	41	23	3 1	29
2	0	10	55	5 27	2	47	3	4 46	4	44	19	2 56	28
3	0	16	22	5 27	2	51	47	4 44	4	47	10	2 51	27
4	0	21	49	5 27	2	56	28	4 41	4	49	57	2 47	26
5	0	27	16	5 27	3	1	6	4 38	4	52	39	2 42	25
				5 26				4 35				2 36	
6	0	32	42	5 26	3	5	41	4 32	4	55	15	2 31	24
7	0	38	8	5 25	3	10	13	4 29	4	57	46	2 26	23
8	0	43	33	5 24	3	14	42	4 27	5	0	12	2 21	22
9	0	48	57	5 24	3	19	9	4 24	5	2	33	2 17	21
10	0	54	21	5 23	3	23	33	4 21	5	4	50	2 11	20
				5 21				4 17				2 6	19
11	0	59	44	5 21	3	27	54	4 13	5	7	1	2 0	18
12	1	5	5	5 20	3	32	11	4 10	5	9	7	1 55	17
13	1	10	26	5 18	3	36	24	4 6	5	11	7	1 50	16
14	1	15	46	5 17	3	40	34	4 3	5	13	2	1 44	15
15	1	21	4	5 16	3	44	40	3 59	5	14	52	1 39	14
16	1	26	21	5 15	3	48	43	3 55	5	16	36	1 33	13
17	1	31	37	5 13	3	52	42	3 51	5	18	15	1 27	12
18	1	36	52	5 12	4	0	28	3 48	5	19	48	1 22	11
19	1	42	5	5 10	4	4	16	3 44	5	21	15	1 17	10
20	1	47	17	5 8	4	8	0	3 40	5	22	37	1 11	9
21	1	52	27	5 6	4	11	40	3 35	5	23	54	1 5	8
22	2	2	41	5 4	4	15	15	3 31	5	25	5	1 0	7
23	2	7	45	5 2	4	18	46	3 27	5	26	10	0 54	6
24	2	12	47	5 1	4	22	13	3 23	5	27	10	0 47	5
25				4 59				3 18	5	28	4	0 41	4
26	2	17	48	4 57	4	25	36	3 14	5	28	51	0 35	3
27	2	22	47	4 54	4	28	54	3 9	5	29	32	0 29	2
28	2	27	44	4 51	4	32	8	3 5	5	30	7	0 24	1
29	2	32	38		4	35	17		5	30	36		0
30	2	37	29		4	38	22		5	31	0		
	Sig. XI Adde.			Diff.	Sig. X. Adde.			Diff.	Sig. IX. Adde.			Diff.	Gr.

TABULA EQUATIONUM JOVIS.

Anomalia media Jovis.

Gr.	Sig. III. Subtr.			Diff.	Sig. IV. Subtr.			Diff.	Sig. V. Subtr.			Diff.	
	°	'	"		°	'	"		°	'	"		
0	5	31	0	0 18	4	55	40	2 45	2	54	48	5 12	30
1	5	31	18	0 12	4	52	55	2 51	2	49	36	5 16	29
2	5	31	30	0 6	4	50	4	2 56	2	44	20	5 20	28
3	5	31	36	0 0	4	47	8	3 2	2	39	0	5 24	27
4	5	31	36	0 6	4	44	6	3 7	2	33	36	5 27	26
5	5	31	30	0 12	4	40	59	3 13	2	28	9	5 30	25
6	5	31	18	0 18	4	37	46	3 19	2	22	39	5 33	24
7	5	31	0	0 25	4	34	27	3 25	2	17	6	5 36	23
8	5	30	35	0 31	4	31	2	3 30	2	11	30	5 39	22
9	5	30	4	0 37	4	27	32	3 36	2	5	51	5 42	21
10	5	29	27	0 43	4	23	56	3 41	2	0	9	5 43	20
11	5	28	44	0 49	4	20	15	3 46	1	54	26	5 46	19
12	5	27	55	0 55	4	16	29	3 52	1	48	40	5 49	18
13	5	27	0	1 2	4	12	37	3 57	1	42	51	5 51	17
14	5	25	58	1 8	4	8	40	4 2	1	37	0	5 54	16
15	5	24	50	1 14	4	4	38	4 6	1	31	6	5 56	15
16	5	23	36	1 20	4	0	32	4 11	1	25	10	5 58	14
17	5	22	16	1 26	3	56	21	4 17	1	19	12	5 59	13
18	5	20	50	1 32	3	52	4	4 22	1	13	13	6 0	12
19	5	19	17	1 38	3	47	42	4 27	1	7	13	6 2	11
20	5	17	39	1 44	3	43	15	4 31	1	1	11	6 3	10
21	5	15	55	1 50	3	38	44	4 35	0	55	8	6 5	9
22	5	14	5	1 57	3	34	9	4 40	0	49	3	6 5	8
23	5	12	8	2 4	3	29	29	4 45	0	42	58	6 6	7
24	5	10	4	2 10	3	24	44	4 49	0	36	52	6 7	6
25	5	7	54	2 15	3	19	55	4 53	0	30	45	6 8	5
26	5	5	39	2 21	3	15	2	4 57	0	24	37	6 9	4
27	5	3	18	2 26	3	10	5	5 2	0	18	28	6 9	3
28	5	0	52	2 33	3	5	3	5 6	0	12	19	6 9	2
29	4	58	19	2 39	2	59	57	5 9	0	6	10	6 10	1
30	4	55	40		2	54	48		0	0	0		0
	Sig. VIII. Adde.			Diff.	Sig. VII. Adde.			Diff.	Sig. VI. Adde.			Diff.	Gr.

LOGARITHMI DISTANTIARUM JOVIS A SOLE.

Anomalia media Jovis.

Gr.	Sig. o. <i>Logarith.</i>	Sig. I. <i>Logarith.</i>	Sig. II. <i>Logarith.</i>	Sig. III. <i>Logarith.</i>	Sig. IV. <i>Logarith.</i>	Sig. V. <i>Logarith.</i>	
0	5 736537	5 734080	5 727144	5 717093	5 706290	5 697840	30
1	5 736534	5 733916	5 726848	5 716729	5 705952	5 697636	29
2	5 736526	5 733747	5 726549	5 716364	5 705616	5 697438	28
3	5 736512	5 733573	5 726247	5 715999	5 705284	5 697246	27
4	5 736493	5 733394	5 725942	5 715633	5 704955	5 697060	26
5	5 736468	5 733210	5 725633	5 715266	5 704630	5 696880	25
6	5 736437	5 733021	5 725321	5 714899	5 704307	5 696707	24
7	5 736401	5 732827	5 725006	5 714532	5 703988	5 696540	23
8	5 736360	5 732629	5 724688	5 714165	5 703672	5 696380	22
9	5 736313	5 732426	5 724367	5 713798	5 703360	5 696227	21
10	5 736260	5 732218	5 724043	5 713431	5 703052	5 696080	20
11	5 736202	5 732006	5 723716	5 713064	5 702748	5 695940	19
12	5 736139	5 731789	5 723386	5 712697	5 702447	5 695807	18
13	5 736070	5 731567	5 723053	5 712331	5 702150	5 695680	17
14	5 735996	5 731341	5 722718	5 711965	5 701857	5 695560	16
15	5 735916	5 731110	5 722382	5 711600	5 701569	5 695447	15
16	5 735831	5 730875	5 722043	5 711236	5 701286	5 695342	14
17	5 735740	5 730635	5 721701	5 710873	5 701007	5 695244	13
18	5 735644	5 730391	5 721357	5 710511	5 700732	5 695152	12
19	5 735542	5 730143	5 721011	5 710150	5 700462	5 695067	11
20	5 735435	5 729890	5 720663	5 709791	5 700197	5 694990	10
21	5 735324	5 729633	5 720313	5 709433	5 699938	5 694920	9
22	5 735207	5 729372	5 719961	5 709076	5 699683	5 694858	8
23	5 735084	5 729107	5 719607	5 708720	5 699433	5 694803	7
24	5 734956	5 728838	5 719252	5 708366	5 699189	5 694755	6
25	5 734823	5 728565	5 718895	5 708014	5 698950	5 694713	5
26	5 734685	5 728288	5 718536	5 707665	5 698716	5 694680	4
27	5 734541	5 728008	5 718177	5 707318	5 698488	5 694655	3
28	5 734392	5 727724	5 717816	5 706973	5 698266	5 694637	2
29	5 734238	5 727436	5 717455	5 706630	5 698050	5 694626	1
30	5 734080	5 727144	5 717093	5 706290	5 697840	5 694622	0
	Sig. XI.	Sig. X.	Sig. IX.	Sig. VIII.	Sig. VII.	Sig. VI.	Gr.

TABULA LATITUDINARIA JOVIS.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor.			Subtr.		Cur- tatio	Sig. 1. Bor.			Subtr.		Cur- tatio	Sig. 2. Bor.			Subtr.		Cur- tatio	Gr.
	Sig. 6. Auf.			Subtr.			Sig. 7. Auf.			Subtr.			Sig. 8. Auf.			Subtr.			
	Inclinatio			Reduct.			Inclinatio			Reduct.			Inclinatio			Reduct.			
Gr.	o	i	ii	i	ii	Log.	o	i	ii	i	ii	Log.	o	i	ii	i	ii	Log.	
0	0	0	0	0	0	0	0	39	35	0	24	29	I	8	34	0	24	86	30
1	0	I	23	0	I	0	0	40	46	0	24	30	I	9	14	0	23	88	29
2	0	2	46	0	2	0	0	41	57	0	25	32	I	9	54	0	23	90	28
3	0	4	9	0	3	0	0	43	7	0	25	34	I	10	32	0	22	91	27
4	0	5	31	0	4	0	0	44	16	0	25	36	I	11	9	0	22	93	26
5	0	6	54	0	5	I	0	45	24	0	26	38	I	11	45	0	21	94	25
6	0	8	16	0	6	I	0	46	32	0	26	40	I	12	19	0	20	96	24
7	0	9	39	0	7	2	0	47	39	0	26	42	I	12	52	0	20	97	23
8	0	11	I	0	8	2	0	48	44	0	26	44	I	13	24	0	19	99	22
9	0	12	23	0	8	3	0	49	49	0	27	46	I	13	54	0	18	100	21
10	0	13	45	0	9	3	0	50	53	0	27	48	I	14	23	0	18	102	20
11	0	15	6	0	10	4	0	51	56	0	27	50	I	14	51	0	17	103	19
12	0	16	27	0	11	5	0	52	58	0	27	52	I	15	17	0	16	104	18
13	0	17	48	0	12	6	0	53	59	0	27	53	I	15	42	0	15	105	17
14	0	19	9	0	13	7	0	55	0	0	27	55	I	16	6	0	14	106	16
15	0	20	29	0	14	8	0	55	59	0	27	57	I	16	28	0	14	107	15
16	0	21	49	0	14	9	0	56	57	0	27	59	I	16	49	0	13	108	14
17	0	23	9	0	15	10	0	57	54	0	27	61	I	17	8	0	12	109	13
18	0	24	28	0	16	11	0	58	50	0	27	64	I	17	26	0	11	110	12
19	0	25	46	0	17	12	0	59	45	0	27	66	I	17	43	0	10	111	11
20	0	27	5	0	18	13	I	0	39	0	27	68	I	17	58	0	9	112	10
21	0	28	22	0	18	15	I	I	31	0	27	69	I	18	11	0	8	112	9
22	0	29	39	0	19	16	I	2	23	0	26	71	I	18	24	0	8	113	8
23	0	30	56	0	20	18	I	3	13	0	26	73	I	18	35	0	7	113	7
24	0	32	12	0	20	19	I	4	3	0	26	75	I	18	44	0	6	114	6
25	0	33	27	0	21	20	I	4	51	0	26	77	I	18	52	0	5	114	5
26	0	34	42	0	22	22	I	5	38	0	25	79	I	18	58	0	4	114	4
27	0	35	56	0	22	24	I	6	24	0	25	81	I	19	3	0	3	115	3
28	0	37	10	0	23	25	I	7	8	0	25	83	I	19	7	0	2	115	2
29	0	38	23	0	23	27	I	7	52	0	24	85	I	19	9	0	I	115	I
30	0	39	35	0	24	29	I	8	34	0	24	86	I	19	10	0	0	115	0
	Sig. 11. Auf.			Adde.			Sig. 10. Auf.			Adde.			Sig. 9. Auf.			Adde.			Gr
	Sig. 5. Bor.			Adde.			Sig. 4. Bor.			Adde.			Sig. 3. Bor.			Adde.			

SERIES OPPOSITIONUM SOLIS ET JOVIS
NOSTRA ETATE FACTARUM CUM
COMPUTO PRÆCEDENTE COLLATA.

Oppositionum Tempora aquata Londini.				Locus Solis verus.			Anom. med. Jovis.				Jupiter Helio- centricus comp.			Error Comp.				
		D.	H.		°	'	''	S	°	'	''		°	'	''		'	''
1657	Dec.	16	11	2	♈	5	47	3	8	21	31	2	♈	5	44	56	-2	7
1659	Jan.	17	11	38	♈	8	8	32	9	24	30	7	♈	8	8	23	-0	9
1660	Feb.	17	6	48	♈	8	58	2	10	27	23	12	♈	8	58	44	+0	42
1661	Mart.	18	17	49	♈	8	59	14	0	0	14	28	♈	9	0	27	+1	13
1662	Apr.	18	19	22	♈	9	4	57	1	3	8	52	♈	9	5	22	+0	25
1663	Maii	21	7	6	♈	10	5	55	2	6	10	9	♈	10	4	47	-1	8
1664	Jun.	23	19	3	♈	12	46	49	3	9	21	33	♈	12	42	44	-4	5
1665	Jul.	30	7	4	♈	17	26	46	4	12	42	58	♈	17	21	18	-5	28
1666	Sept.	5	23	21	♈	23	43	18	5	16	10	14	♈	23	39	46	-3	32
1667	Oct.	13	10	4	♈	0	30	49	6	19	36	17	♈	0	29	37	-1	12
1668	Nov.	17	6	46	♈	6	24	48	7	23	4	12	♈	6	26	0	+1	12
1669	Dec.	20	23	15	♈	10	28	5	8	26	1	50	♈	10	31	8	+3	3
1671	Jan.	21	19	9	♈	12	36	11	9	29	0	0	♈	12	39	56	+3	45
1672	Feb.	21	12	31	♈	13	17	54	11	1	52	32	♈	13	20	54	+3	0
1673	Mart.	23	0	49	♈	13	18	1	0	4	44	3	♈	13	19	59	+1	58
1674	Apr.	23	6	20	♈	13	29	13	1	7	39	10	♈	13	29	25	+0	12
1675	Maii	26	0	10	♈	14	41	55	2	10	41	47	♈	14	40	7	-1	48
1676	Jun.	28	18	57	♈	17	38	15	3	13	54	40	♈	17	34	0	-4	15
1677	Aug.	4	11	58	♈	22	32	40	4	17	17	4	♈	22	28	23	-4	17
1678	Sept.	11	5	50	♈	28	58	35	5	20	44	40	♈	28	56	12	-2	23
1679	Oct.	18	13	7	♈	5	44	0	6	24	10	5	♈	5	43	38	-0	22
1680	Nov.	22	2	49	♈	11	24	45	7	27	26	51	♈	11	26	31	+1	46
1681	Dec.	25	12	41	♈	15	14	20	9	0	32	45	♈	15	15	38	+1	18
1683	Jan.	26	5	13	♈	17	10	0	10	3	30	7	♈	17	10	28	+0	28
1684	Feb.	25	20	26	♈	17	42	38	11	6	22	21	♈	17	42	47	+0	9
1685	Mart.	27	9	4	♈	17	39	15	0	9	13	50	♈	17	39	55	+0	40
1686	Apr.	27	17	9	♈	17	52	40	1	12	9	31	♈	17	54	34	+1	54
1687	Maii	30	15	11	♈	19	12	40	2	15	13	2	♈	19	16	48	+4	8
1688	Julii	3	14	44	♈	22	20	0	3	18	26	52	♈	22	26	29	+6	29
1689	Aug.	9	12	17	♈	27	28	10	4	21	50	15	♈	27	36	16	+8	6

S E R I E S O P P O S I T I O N U M S O L I S E T J O V I S
N O S T R A A E T A T E F A C T A R U M C U M
C O M P U T O P R A E C E D E N T E C O L L A T A.

Oppositionum Tempora aequata Londini.			Locus Solis verus.			Anom. med. Jovis.			Jupiter Helio- centricus comp.			Error Comp.	
D.	H.		°	'	"	°	'	"	°	'	"	'	"
1690	Sept. 16	8 19	♈	4	5 0	5	25	18 14	♈	4	12 5	+7	5
1691	Oct. 23	13 17	♉	10	50 45	6	28	43 7	♉	10	55 38	+4	53
1692	Nov. 26	22 45	♊	16	24 45	8	1	59 1	♊	16	25 27	+0	42
1693	Dec. 30	3 33	♋	20	0 0	9	5	3 57	♋	19	58 18	-1	42
1695	Jan. 30	14 46	♌	21	42 5	10	8	0 14	♌	21	39 17	-2	48
1696	Mart. 1	3 47	♍	22	5 25	11	10	51 55	♍	22	3 38	-1	47
1697	Mart. 31	17 18	♎	21	59 52	0	13	43 43	♎	22	0 11	+0	19
1698	Maii 2	5 26	♏	22	19 8	1	16	40 16	♏	22	21 6	+1	58
1699	Jun. 4	9 33	♐	23	51 10	2	19	45 0	♐	23	55 57	+4	47
1700	Jul. 8	16 0	♑	27	15 0	3	23	0 14	♑	27	22 11	+7	14
1701	Aug. 14	20 2	♒	2	42 15	4	26	24 55	♒	2	47 23	+5	8
1702	Sept. 21	17 1	♓	9	27 35	5	29	53 10	♓	9	29 35	+2	0
1703	Oct. 28	17 20	♈	16	8 0	7	3	17 6	♈	16	6 36	-1	24
1704	Dec. 1	18 46	♉	21	25 0	8	6	31 18	♉	21	22 26	-2	34
1706	Jan. 3	16 6	♊	24	41 37	9	9	34 41	♊	24	38 37	-3	0
1707	Feb. 3	21 55	♋	26	7 40	10	12	29 52	♋	26	6 21	-1	19
1708	Mart. 5	9 10	♌	26	22 48	11	15	21 9	♌	26	23 47	+0	59
1709	Apr. 5	0 50	♍	26	18 10	0	18	13 20	♍	26	20 37	+2	27
1710	Maii 6	17 55	♎	26	45 37	1	21	10 54	♎	26	48 55	+3	18
1711	Jun. 9	6 22	♏	28	35 20	2	24	17 25	♏	28	37 42	+2	22
1712	Jul. 13	21 38	♐	2	20 45	3	27	34 29	♐	2	21 2	+0	17
1713	Aug. 20	5 53	♑	8	2 10	5	1	0 5	♑	8	1 5	-1	5
1714	Sept. 27	2 4	♒	14	52 0	6	4	28 10	♒	14	47 10	-4	50
1715	Nov. 2	19 13	♓	21	20 27	7	7	50 36	♓	21	17 14	-3	13
1716	Dec. 6	12 35	♈	26	20 18	8	11	3 8	♈	26	16 46	-3	32
1718	Jan. 8	2 32	♉	29	17 40	9	14	4 58	♉	29	16 30	-1	10
1719	Feb. 8	4 12	♊	0	30 35	10	16	59 11	♊	0	31 52	+1	17
1720	Mart. 9	16 20	♋	0	43 51	11	19	50 45	♋	0	43 51	+	
1721	Apr. 9	10 52	♌	0	41 59	0	22	43 36	♌	0	41 59	+	
1722	Maii 11	9 19	♍	1	18 41	1	25	42 13	♍	1	18 41	+	

EPOCHÆ MEDIORUM MOTUUM SATURNI.

Annis Julianis ineun- tibus.	Saturnus ab Æquinoct.				Aphel. h I 27°		Nod. h ☾ 20°		Annis Julianis ineun- tibus.	Saturnus ab Æquinoct.				Aphel. h I 28°		Nod. h ☾ 21°	
	s	o	i	''	o	i	''	o	i	''	s	o	i	''	o	i	''
1661	7	12	15	25	41	20	53	24	1696	9	20	19	4	28	0	3	54
62	7	24	28	50	42	40	53	42	97	10	2	34	26	29	20	4	12
63	8	6	42	12	44	0	54	0	98	10	14	47	48	30	40	4	30
64	8	18	55	33	45	20	54	18	99	10	27	1	9	32	0	4	48
1665	9	1	10	55	46	40	54	26	1700	11	9	14	31	33	20	5	6
1666	9	13	24	17	48	0	54	54	1701	11	21	29	53	34	40	5	24
67	9	25	37	38	49	20	55	12	2	0	3	43	14	36	0	5	42
68	10	7	51	0	50	40	55	30	3	0	15	56	36	37	20	6	0
69	10	20	6	22	52	0	55	48	4	0	28	9	57	38	40	6	18
1670	11	2	19	43	53	20	56	6	1705	1	10	25	19	40	0	6	36
1671	11	14	33	5	54	40	56	24	1706	1	22	38	41	41	20	6	54
72	11	26	46	26	56	0	56	42	7	2	4	52	2	42	40	7	12
73	0	9	1	48	57	20	57	0	8	2	17	5	24	44	0	7	30
74	0	21	15	9	58	40	57	18	9	2	29	20	40	45	20	7	48
1675	1	3	28	31	28 I	0	57	36	1710	3	11	34	7	46	40	8	6
1676	1	15	41	52	1	20	57	54	1711	3	23	47	29	48	0	8	24
77	1	27	57	14	2	40	58	12	12	4	6	0	50	49	20	8	42
78	2	10	10	36	4	0	58	30	13	4	18	16	12	50	40	9	0
79	2	22	23	57	5	20	58	48	14	5	0	29	33	52	0	9	18
1680	3	4	37	19	6	40	59	6	1715	5	12	42	55	53	20	9	36
1681	3	16	52	41	8	0	59	24	1716	5	24	56	16	54	40	9	54
82	3	29	6	2	9	20	59	42	17	6	7	11	38	56	0	10	12
83	4	11	19	24	10	40	21 0	0	18	6	19	25	0	57	20	10	30
84	4	23	32	45	12	0	☾ 0	18	19	7	1	38	21	58	40	10	48
1685	5	5	48	7	13	20	0	36	1720	7	13	51	43	29 I	0	11	6
1686	5	18	1	29	14	40	0	54	1721	7	26	7	5	1	20	11	24
87	6	0	14	50	16	0	1	12	22	8	8	20	26	2	40	11	42
88	6	12	28	12	17	20	1	30	23	8	20	33	48	4	0	12	0
89	6	24	43	34	18	40	1	48	24	9	2	47	9	5	20	12	18
1690	7	6	56	55	20	0	2	6	1725	9	15	2	31	6	40	12	36
1691	7	19	10	17	21	20	2	24	1726	9	27	15	53	8	0	12	54
92	8	1	23	38	22	40	2	42	27	10	9	29	14	9	20	13	12
93	8	13	39	0	24	0	3	0	28	10	21	42	36	10	40	13	30
94	8	25	52	21	25	20	3	18	29	11	3	57	58	12	0	13	48
1695	9	8	5	43	26	40	3	36	1730	11	16	11	19	13	20	14	6

EPOCHÆ MEDIORUM MOTUUM SATURNI.

Annis Julianis ineun- tibus.	Saturnus ab Æquinoct.	Aphel. h ♄ 29°			Nod. h ♅ 21°		Annis Julianis ineun- tibus.	Saturnus ab Æquinoct.	Aphel. h ♄ 0°			Nod. h ♅ 21°		
		s	o	i	II	o			i	II	s	o	i	II
1731	11 28 24 41					14 40	14 24	1766	2 6 30 17				1 20	24 54
32	0 10 38 2					16 0	14 42	67	2 18 43 38				2 40	25 12
33	0 22 53 24					17 20	15 0	68	3 0 57 0				4 0	25 30
34	1 5 6 45					18 40	15 18	69	3 13 12 22				5 20	25 48
1735	1 17 20 7					20 0	15 36	1770	3 25 25 43				6 40	26 6
1736	1 29 33 28					21 20	15 54	1771	4 7 39 5				8 0	26 24
37	2 11 48 50					22 40	16 12	72	4 19 52 26				9 20	26 42
38	2 24 2 12					24 0	16 30	73	5 2 7 48				10 40	27 0
39	3 6 15 33					25 20	16 48	74	5 14 21 9				12 0	27 18
1740	3 18 28 55					26 40	17 6	1775	5 26 34 31				13 20	27 36
1741	4 0 44 17					28 0	17 24	1776	6 8 47 52				14 40	27 54
42	4 12 57 38					29 20	17 42	77	6 21 3 14				16 0	28 12
43	4 25 11 0					30 40	18 0	78	7 3 16 36				17 20	28 30
44	5 7 24 21					32 0	18 18	79	7 15 29 57				18 40	28 48
1745	5 19 39 43					33 20	18 36	1780	7 27 43 19				20 0	29 6
1746	6 1 53 5					34 40	18 54	1781	8 9 58 41				21 20	29 24
47	6 14 6 26					36 0	19 12	82	8 22 12 2				22 40	29 42
48	6 26 19 48					37 20	19 30	83	9 4 25 24				24 0	30 0
49	7 8 35 10					38 40	19 48	84	9 16 38 45				25 20	30 18
1750	7 20 48 31					40 0	20 6	1785	9 28 54 7				26 40	30 36
1751	8 3 1 53					41 20	20 24	1786	10 11 7 29				28 0	30 54
52	8 15 15 14					42 40	20 42	87	10 23 20 50				29 20	31 12
53	8 27 30 36					44 0	21 0	88	11 5 34 12				30 40	31 30
54	9 9 43 57					45 20	21 18	89	11 17 49 34				32 0	31 48
1755	9 21 57 19					46 40	21 36	1790	0 0 2 55				33 20	32 6
1756	10 4 10 40					48 0	21 54	1791	0 12 16 17				34 40	32 24
57	10 16 26 2					49 20	22 12	92	0 24 29 38				36 0	32 42
58	10 28 39 24					50 40	22 30	93	1 6 45 0				37 20	33 0
59	11 10 52 45					52 0	22 48	94	1 18 58 21				38 40	33 18
1760	11 23 6 7					53 20	23 6	1795	2 1 11 43				40 0	33 36
1761	0 5 21 29					54 40	23 24	1796	2 13 25 4				41 20	33 54
62	0 17 34 50					56 0	23 42	97	2 25 40 26				42 40	34 12
63	0 29 48 12					57 20	24 0	98	3 7 53 48				44 0	34 30
64	1 12 1 33					58 40	24 18	99	3 20 7 9				45 20	34 48
1765	1 24 16 55					♄ 0 0	24 36	1800	4 2 20 31				46 40	35 0

MEDIUS MOTUS SATURNI
AD DIES MENSIVM.

	JANUAR.	FEBRUA.	MARTII	APRILIS	MAII	JUNII
<i>Die Men- fis.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>
	o / //	o / //	o / //	o / //	o / //	o / //
1	o 2 I	I 4 18	2 o 33	3 2 50	4 3 7	5 5 24
2	o 4 I	I 6 18	2 2 34	3 4 51	4 5 7	5 7 24
3	o 6 2	I 8 19	2 4 34	3 6 51	4 7 8	5 9 25
4	o 8 2	I 10 19	2 6 35	3 8 52	4 9 8	5 11 26
5	o 10 3	I 12 20	2 8 35	3 10 52	4 11 9	5 13 26
6	o 12 3	I 14 20	2 10 36	3 12 53	4 13 10	5 15 27
7	o 14 4	I 16 21	2 12 36	3 14 54	4 15 10	5 17 27
8	o 16 4	I 18 22	2 14 37	3 16 54	4 17 11	5 19 28
9	o 18 5	I 20 22	2 16 38	3 18 55	4 19 11	5 21 28
10	o 20 6	I 22 23	2 18 38	3 20 55	4 21 12	5 23 29
11	o 22 6	I 24 23	2 20 39	3 22 56	4 23 12	5 25 29
12	o 24 7	I 26 24	2 22 39	3 24 56	4 25 13	5 27 30
13	o 26 7	I 28 24	2 24 40	3 26 57	4 27 13	5 29 30
14	o 28 8	I 30 25	2 26 40	3 28 57	4 29 14	5 31 31
15	o 30 8	I 32 25	2 28 41	3 30 58	4 31 14	5 33 32
16	o 32 9	I 34 26	2 30 41	3 32 58	4 33 15	5 35 32
17	o 34 9	I 36 26	2 32 41	3 34 59	4 35 16	5 37 33
18	o 36 10	I 38 27	2 34 42	3 37 o	4 37 16	5 39 33
19	o 38 10	I 40 28	2 36 43	3 39 o	4 39 17	5 41 34
20	o 40 11	I 42 28	2 38 44	3 41 I	4 41 17	5 43 34
21	o 42 12	I 44 29	2 40 44	3 43 I	4 43 18	5 45 35
22	o 44 12	I 46 29	2 42 45	3 45 2	4 45 18	5 47 35
23	o 46 13	I 48 30	2 44 45	3 47 2	4 47 19	5 49 36
24	o 48 13	I 50 30	2 46 46	3 49 3	4 49 19	5 51 36
25	o 50 14	I 52 31	2 48 46	3 51 3	4 51 20	5 53 37
26	o 52 14	I 54 31	2 50 47	3 53 4	4 53 20	5 55 38
27	o 54 15	I 56 32	2 52 47	3 55 4	4 55 21	5 57 38
28	o 56 15	I 58 33	2 54 48	3 57 5	4 57 22	5 59 39
29	o 58 16	In Anno Bis- sextili post Fe- bruarium adde unius diei mo- tum. , "	2 56 48	3 59 6	4 59 22	6 I 39
30	I o 17		2 58 49	4 I 6	5 I 23	6 3 40
31	I 2 17		3 o 50	/ //	5 3 23	/ //
<i>Mot. Aphel.</i>	o 7	o 13	o 20	o 27	o 33	o 49
<i>Mot. Nodi</i>	o 2	o 3	o 5	o 6	o 8	o 9

*M E D I I M O T U S S A T U R N I .
A D D I E S M E N S I U M .*

	JULII	AUGUST.	SEPTEM.	OCTOB.	NOVEM.	DECEMB.
<i>Die Men- fis.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>	<i>Med. Mot. Saturni.</i>
	o i //	o i //	o i //	o i //	o i //	o i //
1	6 5 40	7 7 57	8 10 15	9 10 31	10 12 48	11 13 5
2	6 7 41	7 9 58	8 12 15	9 12 32	10 14 49	11 15 6
3	6 9 42	7 11 58	8 14 16	9 14 32	10 16 49	11 17 6
4	6 11 42	7 13 59	8 16 16	9 16 33	10 18 50	11 19 7
5	6 13 43	7 15 59	8 18 17	9 18 33	10 20 50	11 21 7
6	6 15 43	7 18 0	8 20 17	9 20 34	10 22 51	11 23 8
7	6 17 44	7 20 0	8 22 18	9 22 34	10 24 51	11 25 8
8	6 19 44	7 22 1	8 24 18	9 24 35	10 26 52	11 27 9
9	6 21 45	7 24 1	8 26 19	9 26 35	10 28 52	11 29 9
10	6 23 45	7 26 2	8 28 19	9 28 36	10 30 53	11 31 10
11	6 25 46	7 28 2	8 30 20	9 30 36	10 32 53	11 33 11
12	6 27 46	7 30 3	8 32 20	9 32 37	10 34 54	11 35 11
13	6 29 47	7 32 4	8 34 21	9 34 37	10 36 55	11 37 12
14	6 31 48	7 34 4	8 36 21	9 36 38	10 38 55	11 39 12
15	6 33 48	7 36 5	8 38 22	9 38 39	10 40 56	11 41 13
16	6 35 49	7 38 5	8 40 23	9 40 39	10 42 56	11 43 13
17	6 37 49	7 40 6	8 42 23	9 42 40	10 44 57	11 45 14
18	6 39 50	7 42 6	8 44 24	9 44 40	10 46 58	11 47 14
19	6 41 50	7 44 7	8 46 25	9 46 41	10 48 58	11 49 15
20	6 43 51	7 46 7	8 48 25	9 48 42	10 50 59	11 51 15
21	6 45 51	7 48 8	8 50 26	9 50 42	10 52 59	11 53 16
22	6 47 52	7 50 9	8 52 26	9 52 43	10 55 0	11 55 16
23	6 49 52	7 52 9	8 54 27	9 54 43	10 57 0	11 57 17
24	6 51 53	7 54 10	8 56 27	9 56 44	10 59 1	11 59 18
25	6 53 54	7 56 10	8 58 28	9 58 44	11 1 2	12 1 18
26	6 55 54	7 58 11	9 0 28	10 0 45	11 3 2	12 3 19
27	6 57 55	8 0 11	9 2 29	10 2 46	11 5 3	12 5 19
28	6 59 55	8 2 12	9 4 29	10 4 46	11 7 3	12 7 20
29	7 1 56	8 4 13	9 6 30	10 6 47	11 9 4	12 9 20
30	7 3 56	8 6 13	9 8 31	10 8 47	11 11 5	12 11 21
31	7 5 57	8 8 14	/ //	10 10 48	/ //	12 13 21
<i>Mot. Aphel. o 47</i>						
<i>Mot. Nodi o 11</i>						
		o 53	I 0	I 7	I 13	I 20
		o 12	o 13	o 15	o 16	o 18

MEDII MOTUS SATURNI AB ÆQUINOCTIO.

IN ANNORUM CENTURIIS.

IN HORIS ET MIN.

Annis Julian. Collect.	Medius Motus Saturni.				Æquatio Secularis.		Motus Aphelii Saturni.				Motus Nodi Saturni		Medius Motus Saturni.					
	S	O	I	II	O	I	S	O	I	II	O	I	I	II	III	I	II	III
100	4	23	6	0	0	1,4	0	2	13	20	0	30	I	0	5	31	2	36
200	9	16	12	0	0	5,6	0	4	26	40	I	0	2	0	10	32	2	41
300	2	9	18	0	0	12,5	0	6	40	0	I	30	3	0	15	33	2	46
400	7	2	24	0	0	22,2	0	8	53	20	2	0	4	0	20	34	2	51
500	11	25	30	0	0	34,8	0	11	6	40	2	30	5	0	25	35	2	56
600	4	18	36	0	0	50,0	0	13	20	0	3	0	6	0	30	36	3	I
700	9	11	42	0	I	8,1	0	15	33	20	3	30	7	0	35	37	3	6
800	2	4	48	0	I	29,0	0	17	46	40	4	0	8	0	40	38	3	11
900	6	27	54	0	I	52,6	0	20	0	0	4	30	9	0	45	39	3	16
1000	11	21	0	0	2	19,0	0	22	13	20	5	0	10	0	50	40	3	21
1100	4	14	6	0	2	48,2	0	24	26	40	5	30	11	0	55	41	3	26
1200	9	7	12	0	3	20,2	0	26	40	0	6	0	12	I	0	42	3	31
1300	2	0	18	0	3	55,0	0	28	53	20	6	30	13	I	5	43	3	36
1400	6	23	24	0	4	32,5	I	I	6	40	7	0	14	I	10	44	3	41
1500	11	16	30	0	5	12,8	I	3	20	0	7	30	15	I	15	45	3	46
1600	4	9	36	0	5	55,9	I	5	33	20	8	0	16	I	20	46	3	51
1700	9	2	42	0	6	41,7	I	7	46	40	8	30	17	I	25	47	3	56
1800	I	25	48	0	7	30,4	I	10	0	0	9	0	18	I	30	48	4	I
1900	6	18	54	0	8	21,8	I	12	13	20	9	30	19	I	35	49	4	6
2000	11	12	0	0	9	16,1	I	14	26	40	10	0	20	I	40	50	4	11
2100	4	5	6	0	10	13,1	I	16	40	0	10	30	21	I	45	51	4	16
2200	8	28	12	0	11	12,9	I	18	53	20	11	0	22	I	50	52	4	21
2300	I	21	18	0	12	15,4	I	21	6	40	11	30	23	I	55	53	4	26
2400	6	14	24	0	13	20,8	I	23	20	0	12	0	24	2	I	54	4	31
2500	11	7	30	0	14	28,9	I	25	33	20	12	30	25	2	6	55	4	36
2600	4	0	36	0	15	39,7	I	27	46	40	13	0	26	2	11	56	4	41
2700	8	23	42	0	16	53,4	2	0	0	0	13	30	27	2	16	57	4	46
2800	I	16	48	0	18	9,8	2	2	13	20	14	0	28	2	21	58	4	51
2900	6	9	54	0	19	29,1	2	4	26	40	14	30	29	2	26	59	4	56
3000	11	3	0	0	20	51,1	2	6	40	0	15	0	30	2	31	60	5	I

*Æquatio Secularis subtrahenda est e medio Motu Saturni tam in Seculis
præteritis quam futuris.*

TABULA EQUATIONUM SATURNI.

Anomalia media Saturni.

Gr.	Sig. o. Subtr.			Diff.	Sig. I. Subtr.			Diff.	Sig. II. Subtr.			Diff.	
	o	i	ii		o	i	ii		o	i	ii		
0	0	0	0		3	4	27		5	27	13		30
1	0	6	23	6 23	3	10	6	5 39	5	30	49	3 36	29
2	0	12	46	6 23	3	15	43	5 37	5	34	19	3 30	28
3	0	19	9	6 23	3	21	16	5 33	5	37	43	3 24	27
4	0	25	31	6 22	3	26	47	5 30	5	41	2	3 19	26
5	0	31	53	6 22	3	32	14	5 27	5	44	15	3 13	25
6	0	38	15	6 22	3	37	39	5 24	5	47	22	3 7	24
7	0	44	36	6 21	3	42	59	5 21	5	50	23	3 1	23
8	0	50	56	6 20	3	48	16	5 17	5	53	19	2 55	22
9	0	57	16	6 20	3	53	29	5 13	5	56	9	2 50	21
10	1	3	34	6 18	3	58	40	5 10	5	58	53	2 44	20
11	1	9	52	6 17	4	3	46	5 6	6	1	31	2 38	19
12	1	16	9	6 17	4	8	49	5 3	6	4	2	2 31	18
13	1	22	25	6 16	4	13	48	4 59	6	6	27	2 25	17
14	1	28	39	6 14	4	18	43	4 55	6	8	47	2 19	16
15	1	34	52	6 13	4	23	33	4 50	6	11	0	2 13	15
16	1	41	4	6 12	4	28	20	4 46	6	13	6	2 6	14
17	1	47	14	6 10	4	33	2	4 42	6	15	7	2 0	13
18	1	53	23	6 9	4	37	41	4 38	6	17	1	1 54	12
19	1	59	30	6 7	4	42	14	4 33	6	18	48	1 47	11
20	2	5	35	6 5	4	46	44	4 29	6	20	28	1 40	10
21	2	11	38	6 3	4	51	8	4 24	6	22	2	1 34	9
22	2	17	40	6 2	4	55	29	4 20	6	23	30	1 28	8
23	2	23	39	5 59	4	59	44	4 15	6	24	51	1 21	7
24	2	29	36	5 57	5	3	55	4 11	6	26	5	1 14	6
25	2	35	31	5 55	5	8	1	4 6	6	27	12	1 7	5
26	2	41	23	5 52	5	12	2	4 1	6	28	12	1 0	4
27	2	47	13	5 50	5	15	58	3 56	6	29	5	0 53	3
28	2	53	0	5 47	5	19	49	3 51	6	29	52	0 46	2
29	2	58	45	5 45	5	23	34	3 45	6	30	31	0 39	1
30	3	4	27	5 42	5	27	13	3 39	6	31	3	0 32	0
Gr.	Sig. XI. Adde.			Diff.	Sig. X. Adde.			Diff.	Sig. IX. Adde.			Diff.	Gr.

TABULA ÆQUATIONUM SATURNI.

Anomalia media Saturni.

Sig. III.				Diff.	Sig. IV.				Diff.	Sig. V.				Diff.	Gr.	
Subtr.					Subtr.					Subtr.						
Gr.	o	i	II	i	II	o	i	II	i	II	o	i	II	i	II	
0	6	31	3	0	26	5	51	18	3	12	3	28	41	6	12	
1	6	31	29	0	19	5	48	6	3	19	3	22	29	6	17	
2	6	31	48	0	12	5	44	47	3	25	3	16	12	6	21	
3	6	32	0	0	4	5	41	22	3	32	3	9	51	6	25	
4	6	32	4	0	3	5	37	50	3	40	3	3	26	6	29	
5	6	32	1	0	10	5	34	10	3	47	2	56	57	6	33	
6	6	31	51	0	18	5	30	23	3	53	2	50	24	6	37	
7	6	31	33	0	25	5	26	30	4	0	2	43	47	6	40	
8	6	31	8	0	32	5	22	30	4	7	2	37	7	6	44	
9	6	30	36	0	39	5	18	23	4	13	2	30	23	6	48	
10	6	29	58	0	47	5	14	10	4	20	2	23	35	6	51	
11	6	29	11	0	54	5	9	50	4	26	2	16	44	6	53	
12	6	28	17	1	1	5	5	24	4	33	2	9	51	6	56	
13	6	27	16	1	8	5	0	51	4	39	2	2	54	6	59	
14	6	26	8	1	16	4	56	12	4	45	1	55	55	7	2	
15	6	24	52	1	23	4	51	26	4	51	1	48	53	7	4	
16	6	23	29	1	31	4	46	35	4	57	1	41	49	7	6	
17	6	21	58	1	38	4	41	38	5	3	1	34	43	7	9	
18	6	20	20	1	45	4	36	35	5	9	1	27	34	7	11	
19	6	18	35	1	52	4	31	26	5	16	1	20	23	7	13	
20	6	16	43	2	0	4	26	10	5	21	1	13	10	7	14	
21	6	14	42	2	7	4	20	49	5	27	1	5	56	7	16	
22	6	12	35	2	14	4	15	22	5	33	0	58	40	7	17	
23	6	10	21	2	21	4	9	49	5	38	0	51	23	7	18	
24	6	8	0	2	29	4	4	11	5	42	0	44	5	7	19	
25	6	5	31	2	36	3	58	29	5	47	0	36	46	7	21	
26	6	2	55	2	43	3	52	42	5	53	0	29	25	7	21	
27	6	0	11	2	50	3	46	49	5	58	0	22	4	7	21	
28	5	57	21	2	58	3	40	51	6	3	0	14	43	7	21	
29	5	54	23	3	5	3	34	48	6	7	0	7	22	7	22	
30	5	51	18			3	28	41			0	0	0	7	22	
Gr.	Sig. VIII.				Diff.	Sig. VII.				Diff.	Sig. VI.				Diff.	Gr.
Adde.				Adde.				Adde.								

LOGARITHMI DISTANTIARUM SATURNI A SOLE.

Anomalia media Saturni.

Gr.	Sig. o. Logarith.	Diffe- rentia.	Sig. I. Logarith.	Diffe- rentia.	Sig. II. Logarith.	Diffe- rentia.	
0	6 003628		6 000791		5 992741		30
1	6 003625	3	6 000601	189	5 992397	344	29
2	6 003615	10	6 000406	195	5 992048	349	28
3	6 003599	16	6 000205	201	5 991696	352	27
4	6 003577	22	5 999998	207	5 991340	356	26
5	6 003548	29	5 999786	212	5 990979	360	25
		35		218		364	
6	6 003513	42	5 999568	224	5 990615	368	24
7	6 003471	47	5 999344	230	5 990247	372	23
8	6 003424	55	5 999114	236	5 989875	375	22
9	6 003369	60	5 998878	241	5 989500	378	21
10	6 003309	67	5 998637	246	5 989122	383	20
		72		252		386	19
11	6 003242	80	5 998390	256	5 988739	389	18
12	6 003170	86	5 998138	262	5 988353	392	17
13	6 003090	92	5 997882	268	5 987964	395	16
14	6 003004	98	5 997620	273	5 987572	398	15
15	6 002911	105	5 997351	278	5 987177	400	14
		110		283		403	13
16	6 002813	117	5 997078	288	5 986779	405	12
17	6 002708	123	5 996800	294	5 986378	408	11
18	6 002598	129	5 996517	298	5 985975	411	10
19	6 002481	135	5 996229	303	5 985570	414	9
20	6 002358	142	5 995935	308	5 985161	416	8
		148		313		418	7
21	6 002229	154	5 995637	317	5 984750	420	6
22	6 002094	160	5 995334	322	5 984336	421	5
23	6 001952	166	5 995026	327	5 983920	423	4
24	6 001804	172	5 994713	331	5 983502	425	3
25	6 001650	177	5 994396	335	5 983082	426	2
		183		340		428	1
26	6 001490		5 994074		5 982660		0
27	6 001324		5 993747		5 982237		
28	6 001152		5 993416		5 981812		
29	6 000974		5 993081		5 981386		
30	6 000791		5 992741		5 980957		
	Sig. XI.	Diff.	Sig. X.	Diff.	Sig. IX.	Diff.	Gr.

LOGARITHMI DISTANTIARUM SATURNI A SOLE.

Anomalia media Saturni.

Gr.	Sig. III. Logarith.	Diffe- rentia.	Sig. IV. Logarith.	Diffe- rentia.	Sig. V. Logarith.	Diffe- rentia.	
0	5 980957		5 968128		5 957965		30
1	5 980528	429	5 967724	404	5 957718	247	29
2	5 980098	430	5 967323	401	5 957478	240	28
3	5 979667	431	5 966926	397	5 957245	233	27
4	5 979234	432	5 966532	394	5 957020	225	26
5	5 978801	433	5 966141	391	5 956803	217	25
6	5 978368	433	5 965754	387	5 956593	210	24
7	5 977934	434	5 965371	383	5 956391	202	23
8	5 977499	435	5 964992	379	5 956197	194	22
9	5 977064	435	5 964617	375	5 956010	187	21
10	5 976629	435	5 964247	370	5 955832	178	20
11	5 976194	435	5 963881	366	5 955662	170	19
12	5 975760	434	5 963520	361	5 955500	162	18
13	5 975326	434	5 963163	357	5 955347	153	17
14	5 974892	434	5 962811	351	5 955202	145	16
15	5 974459	433	5 962465	346	5 955065	137	15
16	5 974026	433	5 962123	341	5 954937	128	14
17	5 973594	432	5 961787	336	5 954817	120	13
18	5 973163	431	5 961456	330	5 954706	111	12
19	5 972734	429	5 961131	325	5 954604	102	11
20	5 972306	428	5 960812	319	5 954510	94	10
21	5 971879	426	5 960499	313	5 954425	85	9
22	5 971454	425	5 960191	307	5 954349	76	8
23	5 971031	423	5 959890	301	5 954282	67	7
24	5 970609	422	5 959595	295	5 954224	58	6
25	5 970189	420	5 959306	288	5 954174	50	5
26	5 969772	417	5 959025	281	5 954134	40	4
27	5 969357	414	5 958749	275	5 954103	31	3
28	5 968945	412	5 958481	268	5 954080	22	2
29	5 968535	410	5 958219	261	5 954067	13	1
30	5 968128	407	5 957965	254	5 954062	4	0
	Sig. VIII.	Diff.	Sig. VII.	Diff.	Sig. VI.	Diff.	Gr.

TABULA LATITUDINARIA SATURNI.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor.	Subtr.		Sig. 1. Bor.	Subtr.		Sig. 2. Bor.	Subtr.		
	Sig. 6. Aufst.	Subtr.	Cur- tatio	Sig. 7. Aufst.	Subtr.	Cur- tatio	Sig. 8. Aufst.	Subtr.	Cur- tatio	
	Inclinatio	Reduct.		Inclinatio	Reduct.		Inclinatio	Reduct.		
Gr.	o	'	"	o	'	"	o	'	"	Log.
0	0	0	0	1	15	4	2	10	2	310
1	0	2	37	1	17	19	2	11	20	316
2	0	5	14	1	19	33	2	12	35	322
3	0	7	51	1	21	46	2	13	47	328
4	0	10	28	1	23	58	2	14	58	334
5	0	13	5	1	26	7	2	16	5	340
6	0	15	41	1	28	15	2	17	10	345
7	0	18	18	1	30	21	2	18	13	350
8	0	20	53	1	32	26	2	19	13	355
9	0	23	29	1	34	29	2	20	11	360
10	0	26	4	1	36	30	2	21	6	365
11	0	28	39	1	38	30	2	21	59	370
12	0	31	13	1	40	28	2	22	49	374
13	0	33	46	1	42	24	2	23	36	378
14	0	36	19	1	44	18	2	24	21	382
15	0	38	51	1	46	10	2	25	3	386
16	0	41	23	1	48	0	2	25	42	389
17	0	43	54	1	49	48	2	26	19	393
18	0	46	24	1	51	35	2	26	53	396
19	0	48	53	1	53	19	2	27	24	399
20	0	51	21	1	55	1	2	27	53	401
21	0	53	48	1	56	41	2	28	19	403
22	0	56	14	1	58	19	2	28	42	406
23	0	58	39	1	59	55	2	29	3	408
24	1	1	4	2	1	29	2	29	21	409
25	1	3	27	2	3	0	2	29	36	410
26	1	5	49	2	4	29	2	29	48	411
27	1	8	9	2	5	56	2	29	57	412
28	1	10	29	2	7	20	2	30	4	413
29	1	12	47	2	8	42	2	30	8	414
30	1	15	4	2	10	2	2	30	10	414
	Sig. 11. Aufst.	Adde.		Sig. 10. Aufst.	Adde.		Sig. 9. Aufst.	Adde.		Gr.
	Sig. 5. Bor.	Adde.		Sig. 4. Bor.	Adde.		Sig. 3. Bor.	Adde.		

SERIES OPPOSITIONUM SOLIS ET SATURNI
NOSTRA ÆTATE FACTARUM CUM
COMPUTO PRÆCEDENTE COLLATA.

Oppositionum Tempora æquata Londini.				Locus Solis verus.			Anom. med. Saturni.				Saturnus Helio- centricus comp.			Error Comp.		
D.	H.			°	'	"	S	°	'	"	°	'	"	'	"	
1658	Mart.	24	17	20	♈	14 35 51	9	10	43	58	♄	14	40	31	+4	40
1659	Apr.	6	10	23	♈	26 47 37	9	23	21	30	♄	26	50	9	+2	32
1660	Apr.	17	21	50	♏	8 40 56	10	5	58	32	♄	8	43	54	+2	58
1661	Apr.	30	5	52	♏	20 21 46	10	18	35	18	♄	20	24	20	+2	34
1662	Maii	12	10	55	♏	1 51 53	11	1	11	47	♄	1	54	10	+2	17
1663	Maii	24	13	28	♏	13 13 20	11	13	48	7	♄	13	16	29	+3	9
1664	Jun.	4	15	16	♏	24 31 10	11	26	24	20	♄	24	34	30	+3	20
1665	Jun.	16	16	59	♏	5 47 48	0	9	0	36	♄	5	51	22	+3	34
1666	Jun.	28	19	44	♏	17 6 45	0	21	37	0	♄	17	10	29	+3	44
1667	Julii	11	0	24	♏	28 31 10	1	4	13	25	♄	28	35	0	+3	50
1668	Julii	22	7	53	♏	10 3 56	1	16	50	6	♄	10	8	15	+4	19
1669	Aug.	3	19	13	♏	21 48 36	1	29	27	9	♄	21	53	19	+4	43
1670	Aug.	16	11	16	♏	3 48 12	2	12	4	34	♄	3	52	54	+4	42
1671	Aug.	29	8	58	♏	16 5 49	2	24	42	30	♄	16	9	37	+3	48
1672	Sept.	10	12	6	♏	28 41 47	3	7	20	51	♄	28	45	12	+3	25
1673	Sept.	23	20	46	♏	11 37 11	3	19	59	41	♈	11	40	45	+3	34
1674	Oct.	7	11	27	♏	24 53 10	4	2	38	58	♈	24	56	21	+3	11
1675	Oct.	21	7	21	♏	8 28 17	4	15	18	44	♏	8	30	50	+2	33
1676	Nov.	3	7	46	♏	22 20 20	4	27	58	54	♏	22	21	51	+1	31
1677	Nov.	17	11	27	♏	6 25 25	5	10	39	18	♏	6	25	40	+0	15
1678	Dec.	1	16	47	♏	20 38 15	5	23	19	52	♏	20	37	33	-0	42
1679	Dec.	15	22	29	♏	4 54 0	6	6	0	25	♏	4	52	3	-1	57
1680	Dec.	29	2	51	♏	19 6 40	6	18	40	54	♏	19	3	35	-3	5
1682	Jan.	12	4	1	♏	3 9 45	7	1	21	8	♏	3	6	45	-3	0
1683	Jan.	26	1	28	♏	17 0 30	7	14	1	0	♏	16	57	8	-3	22
1684	Feb.	8	17	58	♏	0 34 35	7	26	40	28	♏	0	31	14	-3	21
1685	Feb.	21	5	15	♏	13 50 30	8	9	20	0	♏	13	46	49	-3	41
1686	Mart.	6	10	42	♏	26 46 20	8	21	58	4	♏	26	42	52	-3	28
1687	Mart.	19	11	12	♏	9 24 20	9	4	36	11	♏	9	19	26	-4	54
1688	Mart.	31	6	14	♏	21 43 20	9	17	14	0	♏	21	37	28	-5	52

SERIES OPPOSITIONUM SOLIS ET SATURNI
NOSTRA ÆTATE FACTARUM CUM
COMPUTO PRÆCEDENTE COLLATA.

Oppositionum Tempora aequata Londini.				Locus Solis verus.				Anom. med. Saturni.				Saturnus Helio- centricus comp.				Error Comp.	
D. H. /				° / //				° / //				° / //				/ //	
1689	Apr.	12	20 48	♌	3	46	20	9	29	51	12	♍	3	38	43	-7	37
1690	Apr.	25	6 36	♌	15	33	15	10	12	28	5	♍	15	25	16	-7	59
1691	Maii	7	13 15	♌	27	8	45	10	25	4	45	♍	26	59	56	-8	49
1692	Maii	18	17 16	♍	8	34	50	11	7	41	11	♍	8	25	33	-9	17
1693	Maii	30	19 32	♍	19	54	30	11	20	17	28	♍	19	45	11	-9	19
1694	Jun.	11	21 8	♍	1	11	10	0	2	53	40	♍	1	2	10	-9	0
1695	Jun.	23	23 25	♍	12	29	0	0	15	30	0	♍	12	19	49	-9	11
1696	Jul.	5	3 17	♍	23	51	0	0	28	6	22	♍	23	41	16	-9	44
1697	Jul.	17	9 21	♍	5	19	30	1	10	42	58	♍	5	9	55	-9	35
1698	Jul.	29	18 48	♍	16	58	20	1	23	19	52	♍	16	48	55	-9	25
1699	Aug.	11	8 28	♍	28	50	30	2	5	57	4	♍	28	41	5	-9	25
1700	Aug.	23	2 52	♍	10	58	0	2	18	34	45	♍	10	49	16	-8	44
1701	Sept.	5	2 41	♍	23	23	30	3	1	12	57	♍	23	15	30	-8	0
1702	Sept.	18	8 6	♍	6	8	4	3	13	51	22	♍	6	1	12	-6	52
1703	Oct.	1	18 59	♍	19	12	0	3	26	30	24	♍	19	7	4	-4	56
1704	Oct.	14	12 1	♍	2	37	0	4	9	9	53	♍	2	32	33	-4	27
1705	Oct.	28	9 9	♍	16	18	30	4	21	49	45	♍	16	15	48	-2	42
1706	Nov.	11	10 2	♍	0	14	15	5	4	29	55	♍	0	13	48	-0	27
1707	Nov.	25	13 42	♍	14	21	30	5	17	10	21	♍	14	22	18	+0	48
1708	Dec.	8	18 20	♍	28	33	45	5	29	50	51	♍	28	36	8	+2	23
1709	Dec.	22	23 2	♍	12	47	20	6	12	31	20	♍	12	49	44	+2	24
1711	Jan.	6	1 0	♍	26	53	20	6	25	11	36	♍	26	57	29	+4	9
1712	Jan.	20	0 18	♍	10	50	25	7	7	51	37	♍	10	54	36	+4	11
1713	Feb.	1	19 0	♍	24	32	10	7	20	31	18	♍	24	36	57	+4	47
1714	Feb.	15	8 15	♍	7	55	35	8	3	10	29	♍	8	1	40	+6	5
1715	Feb.	28	16 32	♍	21	1	10	8	15	49	18	♍	21	7	20	+6	10
1716	Mart.	12	19 6	♍	3	47	0	8	28	27	36	♍	3	53	15	+6	15
1717	Mart.	25	16 0	♍	16	13	15	9	11	5	27	♍	16	20	6	+6	51
1718	Apr.	7	8 26	♍	28	23	15	9	23	42	55	♍	28	29	14	+5	59
1719	Apr.	19	20 20	♍	10	17	20	10	6	20	0	♍	10	22	36	+5	16

M O N I T U M.

HAbes itaque, Curiose Astrophile, in his Oppositionum *Solis* & Planetarum superiorum Seriebus, quasi Synopsin motuum per sexaginta Annos continuos, prout in Cœlo visi sunt, descriptorum, quas ex observationibus quæ suppetebant accuratioribus, non minore cum fide quam diligentia concinnavimus. Vides etiam Tabulas has nostras examini sat rigido subjectas : Nec Te moveat quod in *Jove* semel ad octo minuta assurgat error ; in *Saturno* vero aliquando ad decem : Haud aliter enim fieri potuit, absq; assumptis novis Hypothesibus nondum satis perspectis, & ad Cœlorum Lapidem Lydium probatis. *Jupiter* autem ab Oppositione Anni 1677 ad eam Anni 1689 revolutus, juxta indubitatas observationes tardior inventus est, quam in præcedente vel subsequente revolutione, totis duodecim minutis primis. *Saturni* etiam periodus, intra Annos 1668 & 1698 facta, Hebdomade fere totâ brevior erat mediâ ejus revolutione ; totidemq; fere Diebus mediâ longior erat altera periodus ab Anno 1689 ad Annum 1719 peracta ; ita ut inter durationes earum intercedat differentia plusquam tredecim dierum. An vero hoc in subsequen-
tibus eventurum sit Posteris curæ esto.

Hæc autem oriri a mutuis maximorum Planetarum in se invicem actionibus, *Solis* vires centripetas interturbantibus, plusquam probabile est : Nec levi argumento indicatur, quod cum Anno 1683 facta fuerit Conjunctio *Jovis* & *Saturni*, in iis Orbium partibus ubi, ob situm Apsidum, proxime accedunt ad invicem Planetæ, junctæ eorum Vires *Saturnum* versus *Solem*, e contra vero *Jovem* à *Sole* tum maxime urgebant ; quapropter *Jupiter*, auctâ velocitate propriâ, ac minutâ vi *Solis* centripetâ, in majorem excurrere debuit Orbem diuturniori periodo absolvendum : Interea dum *Saturnus*, minutâ velocitate propriâ & majori vi versus *Solem* pressus, in minorem Orbem coactus esset, ac proinde breviori Tempore revolutus. Si hæc eadem repetitis vicibus Conjunctionem *Jovis* & *Saturni* in *Leone* consequantur, merito sperandum est errores quos in horum motibus deprehendimus, utpote a trium tantum centrorum efficacîâ oriundi, ope *Geometriae Newtonianæ* tandem tolli posse. Sin minus, ac si aliquando evenerint periodi longiores ubi nunc brevissimi, & è contra, petenda erit causa aliqua extrinsecus agens, de qua nondum constat. Sed de hac re plura alibi.

T A B U L A.



T A B U L A R U M
ASTRONOMICARUM

P A R S A L T E R A

MOTUS PLANETARUM

SECUNDARIORUM;

S I V E

S A T E L L I T U M

J O V I S & S A T U R N I

E X H I B E N S.





TABULARUM

ASTRONOMICARUM

PARS ALTERA

MOTUS PLANETARUM

SECUNDARIORUM

SIVE

SATELLITUM

JOVIS & SATURNI

EXHIBENS



LIBER

EPOCHÆ MEDIORUM MOTUUM QUATUOR SATELLITUM JOVIS.

Annis Julianis ineun- tibus.	Primus ab Æquinoct.	Secundus ab Æquinoct.	Tertius ab Æquinoct.	Quartus ab Æquinoct.	Apsis Quarti ☿
	s o i //	s o i //	s o i //	s o i //	o i
1661	5 21 45 0	11 14 35 0	11 12 8 20	8 24 13 0	4 24
62	9 15 13 40	8 26 23 0	11 18 4 29	7 7 40 20	5 0
63	1 8 42 20	6 8 11 0	11 24 0 38	5 21 7 40	5 36
64	5 2 11 0	3 19 59 0	11 29 56 48	4 4 35 0	6 12
1665	3 19 9 0	4 13 9 30	1 26 12 0	3 9 36 36	6 48
1666	7 12 37 40	1 24 57 30	2 2 8 9	1 23 3 56	7 24
67	11 6 6 20	11 6 45 30	2 8 4 18	0 6 31 16	8 0
68	2 29 35 0	8 18 33 30	2 14 0 28	10 19 58 36	8 36
69	1 16 33 0	9 11 44 0	4 10 15 40	9 25 0 12	9 12
1670	5 10 1 40	6 23 32 0	4 16 11 49	8 8 27 32	9 48
1671	9 3 30 20	4 5 20 0	4 22 7 58	6 21 54 52	10 24
72	0 26 59 0	1 17 8 0	4 28 4 8	5 5 22 12	11 0
73	11 13 57 0	2 10 18 30	6 24 19 20	4 10 23 48	11 36
74	3 7 25 40	11 22 6 30	7 0 15 29	2 23 51 8	12 12
1675	7 0 54 20	9 3 54 30	7 6 11 38	1 7 18 28	12 48
1676	10 24 23 0	6 15 42 30	7 12 7 48	11 20 45 48	13 24
77	9 11 21 0	7 8 53 0	9 8 23 0	10 25 47 24	14 0
78	1 4 49 40	4 20 41 0	9 14 19 9	9 9 14 44	14 36
79	4 28 18 20	2 2 29 0	9 20 15 18	7 22 42 4	15 12
1680	8 21 47 0	11 14 17 0	9 26 11 28	6 6 9 24	15 48
1681	7 8 45 0	0 7 27 30	11 22 26 40	5 11 11 0	16 24
82	11 2 13 40	9 19 15 30	11 28 22 49	3 24 38 20	17 0
83	2 25 42 20	7 1 3 30	0 4 18 58	2 8 5 40	17 36
84	6 19 11 0	4 12 51 30	0 10 15 8	0 21 33 0	18 12
1685	5 6 9 0	5 6 2 0	2 6 30 20	11 26 34 36	18 48
1686	8 29 37 40	2 17 50 0	2 12 26 29	10 10 1 56	19 24
87	0 23 6 20	11 29 38 0	2 18 22 38	8 23 29 16	20 0
88	4 16 35 0	9 11 26 0	2 24 18 48	7 6 56 36	20 36
89	3 3 33 0	10 4 36 30	4 20 34 0	6 11 58 12	21 12
1690	6 27 1 40	7 16 24 30	4 26 30 9	4 25 25 32	21 48
1691	10 20 30 20	4 28 12 30	5 2 26 18	3 8 52 52	22 24
92	2 13 59 0	2 10 0 30	5 8 22 28	1 22 20 12	23 0
93	1 0 57 0	3 3 11 0	7 4 37 40	0 27 21 48	23 36
94	4 24 25 40	0 14 59 0	7 10 33 49	11 10 49 8	24 12
1695	8 17 54 20	9 26 47 0	7 16 29 58	9 24 16 28	24 48

EPOCHÆ MEDIORUM MOTUUM
SATELLITUM JOVIS.

Annis Julianis ineun- tibus.	Primus ab Æquinoct.	Secundus ab Æquinoct.	Tertius ab Æquinoct.	Quartus ab Æquinoct.	Apsis Quarti
	S O I //	S O I //	S O I //	S O I //	S O I //
1696	0 11 23 0	7 8 35 0	7 22 26 8	8 7 43 48	25 24
97	10 28 21 0	8 1 45 30	9 18 41 20	7 12 45 24	26 0
98	2 21 49 40	5 13 33 30	9 24 37 29	5 26 12 44	26 36
99	6 15 18 20	2 25 21 30	10 0 33 38	4 9 40 4	27 12
1700	10 8 47 0	0 7 9 30	10 6 29 48	2 23 7 24	27 48
1701	8 25 45 0	1 0 20 0	0 2 45 0	1 28 9 0	28 24
2	0 19 13 40	10 12 8 0	0 8 41 9	0 11 36 20	29 0
3	4 12 42 20	7 23 56 0	0 14 37 18	10 25 3 40	29 36
4	8 6 11 0	5 5 44 0	0 20 33 28	9 8 31 0	30 12
1705	6 23 9 0	5 28 54 30	2 16 48 40	8 13 32 36	0 48
1706	10 16 37 40	3 10 42 30	2 22 44 49	6 26 59 56	1 24
7	2 10 6 20	0 22 30 30	2 28 40 58	5 10 27 16	2 0
8	6 3 35 0	10 4 18 30	3 4 37 8	3 23 54 36	2 36
9	4 20 33 0	10 27 29 0	5 0 52 20	2 28 56 12	3 12
1710	8 14 1 40	8 9 17 0	5 6 48 29	1 12 23 32	3 48
1711	0 7 30 20	5 21 5 0	5 12 44 38	11 25 50 52	4 24
12	4 0 59 0	3 2 53 0	5 18 40 48	10 9 18 12	5 0
13	2 17 57 0	3 26 3 30	7 14 56 0	9 14 19 48	5 36
14	6 11 25 40	1 7 51 30	7 20 52 9	7 27 47 8	6 12
1715	10 4 54 20	10 19 39 30	7 26 48 18	6 11 14 28	6 48
1716	1 28 23 0	8 1 27 30	8 2 44 28	4 24 41 48	7 24
17	0 15 21 0	8 24 38 0	9 28 59 40	3 29 43 24	8 0
18	4 8 49 40	6 6 26 0	10 4 55 49	2 13 10 44	8 36
19	8 2 18 20	3 18 14 0	10 10 51 58	0 26 38 4	9 12
1720	11 25 47 0	1 0 2 0	10 16 48 8	11 10 5 24	9 48
1721	10 12 45 0	1 23 12 30	0 13 3 20	10 15 7 0	10 24
22	2 6 13 40	11 5 0 30	0 18 59 29	8 28 34 20	11 0
23	5 29 42 20	8 16 48 30	0 24 55 38	7 12 1 40	11 36
24	9 23 11 0	5 28 36 30	1 0 51 48	5 25 29 0	12 12
1725	8 10 9 0	6 21 47 0	2 27 7 0	5 0 30 36	12 48
1726	0 3 37 40	4 3 35 0	3 3 3 9	3 13 57 56	13 24
27	3 27 6 20	1 15 23 0	3 8 59 18	1 27 25 16	14 0
28	7 20 35 0	10 27 11 0	3 14 55 28	0 10 52 36	14 36
29	6 7 33 0	11 20 21 30	5 11 10 40	11 15 54 12	15 12
1730	10 1 1 40	9 2 9 30	5 17 6 49	9 29 21 32	15 48

EPOCHÆ MEDIORUM MOTUUM
SATELLITUM JOVIS.

Annis Julianis ineun- tibus.	Primus ab Æquinoct.	Secundus ab Æquinoct.	Tertius ab Æquinoct.	Quartus ab Æquinoct.	Aphis Quarti ☾
	s o ' "	s o ' "	s o ' "	s o ' "	s o ' "
1731	1 24 30 20	6 13 57 30	5 23 2 58	8 12 48 52	16 24
32	5 17 59 0	3 25 45 30	5 28 59 8	6 26 16 12	17 0
33	4 4 57 0	4 18 56 0	7 25 14 20	6 1 17 48	17 36
34	7 28 25 40	2 0 44 0	8 1 10 29	4 14 45 8	18 12
1735	11 21 54 20	11 12 32 0	8 7 6 38	2 28 12 28	18 48
1736	3 15 23 0	8 24 20 0	8 13 2 48	1 11 39 48	19 24
37	2 2 21 0	9 17 30 30	10 9 18 0	0 16 41 24	20 0
38	5 25 49 40	6 29 18 30	10 15 14 9	11 0 8 44	20 36
39	9 19 18 20	4 11 6 30	10 21 10 18	9 13 36 4	21 12
1740	1 12 47 0	1 22 54 30	10 27 6 28	7 27 3 24	21 48
1741	11 29 45 0	2 16 5 0	0 23 21 40	7 2 5 0	22 24
42	3 23 13 40	11 27 53 0	0 29 17 49	5 15 32 20	23 0
43	7 16 42 20	9 9 41 0	1 5 13 58	3 28 59 40	23 36
44	11 10 11 0	6 21 29 0	1 11 10 8	2 12 27 0	24 12
1745	9 27 9 0	7 14 39 30	3 7 25 20	1 17 28 36	24 48
1746	1 20 37 40	4 26 27 30	3 13 21 29	0 0 55 56	25 24
47	5 14 6 20	2 8 15 30	3 19 17 38	10 14 23 16	26 0
48	9 7 35 0	11 20 3 30	3 25 13 48	8 27 50 36	26 36
49	7 24 33 0	0 13 14 0	5 21 29 0	8 2 52 12	27 12
1750	11 18 1 40	9 25 2 0	5 27 25 9	6 16 19 32	27 48
1751	3 11 30 20	7 6 50 0	6 3 21 18	4 29 46 52	28 24
52	7 4 59 0	4 18 38 0	6 9 17 28	3 13 14 12	29 0
53	5 21 57 0	5 11 48 30	8 5 32 40	2 18 15 48	29 36
54	9 15 25 40	2 23 36 30	8 11 28 49	1 1 43 8	30 12
1755	1 8 54 20	0 5 24 30	8 17 24 58	11 15 10 28	0 48
1756	5 2 23 0	9 17 12 30	8 23 21 8	9 28 37 48	1 24
57	3 19 21 0	10 10 23 0	10 19 36 20	9 3 39 24	2 0
58	7 12 49 40	7 22 11 0	10 25 32 29	7 17 6 44	2 36
59	11 6 18 20	5 3 59 0	11 1 28 38	6 0 34 4	3 12
1760	2 29 47 0	2 15 47 0	11 7 24 48	4 14 1 24	3 48
1761	1 16 45 0	3 8 57 30	1 3 40 0	3 19 3 0	4 24
62	5 10 13 40	0 20 45 30	1 9 36 9	2 2 30 20	5 0
63	9 3 42 20	10 2 33 30	1 15 32 18	0 15 57 40	5 36
64	0 27 11 0	7 14 21 30	1 21 28 28	10 29 25 0	6 12
1765	11 14 9 0	8 7 32 0	3 17 43 40	10 4 26 36	6 48

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

JANUARI.

Die Men- fis.	Primi	Secundi	Tertii	Quarti	Motus Apfis Quarti.
	S o / //	S lo / //	S o / //	S o / //	Min.
1	6 23 29 20	3 11 22 29	1 20 19 3	0 21 34 16	
2	1 16 58 40	6 22 44 59	3 10 38 7	1 13 8 32	
3	8 10 28 10	10 4 7 28	5 0 57 10	2 4 42 48	
4	3 3 57 21	1 15 29 57	6 21 16 14	2 26 17 4	
5	9 27 26 41	4 26 52 26	8 11 35 17	3 17 51 20	
6	4 20 56 2	8 8 14 56	10 1 54 20	4 9 25 36	
7	11 14 25 22	11 19 37 25	11 22 13 24	5 0 59 52	
8	6 7 54 42	3 0 59 54	1 12 32 28	5 22 34 8	
9	1 1 24 3	6 12 22 23	3 2 51 31	6 14 8 24	
10	7 24 53 23	9 23 44 53	4 23 10 34	7 5 42 40	I
11	2 18 22 43	1 5 7 22	6 13 29 38	7 27 16 56	
12	9 11 52 4	4 16 29 51	8 3 48 41	8 18 51 12	
13	4 5 21 24	7 27 52 21	9 24 7 45	9 10 25 28	
14	10 28 50 44	11 9 14 50	11 14 26 48	10 1 59 44	
15	5 22 20 5	2 20 37 19	1 4 45 52	10 23 34 0	
16	0 15 49 25	6 1 59 48	2 25 4 55	11 15 8 16	
17	7 9 18 45	9 13 22 17	4 15 23 59	0 6 42 32	
18	2 2 48 6	0 24 44 47	6 5 43 2	0 28 16 48	
19	8 26 17 26	4 6 7 16	7 26 2 6	1 19 51 4	
20	3 19 46 46	7 17 29 45	9 16 21 9	2 11 25 20	
21	10 13 16 7	10 28 52 14	11 6 40 12	3 2 59 36	2
22	5 6 45 27	2 10 14 44	0 26 59 16	3 24 33 52	
23	0 0 14 47	5 21 37 13	2 17 18 19	4 16 8 8	
24	6 23 44 8	9 2 59 42	4 7 37 23	5 7 42 24	
25	1 17 13 28	0 14 22 12	5 27 56 26	5 29 16 40	
26	8 10 42 48	3 25 44 41	7 18 15 29	6 20 50 56	
27	3 4 12 9	7 7 7 10	9 8 34 33	7 12 25 12	
28	9 27 41 29	10 18 29 39	10 28 53 36	8 3 59 28	
29	4 21 10 49	1 29 52 9	0 19 12 40	8 25 33 44	
30	11 14 40 10	5 11 14 38	2 9 31 43	9 17 8 0	
31	6 8 9 30	8 22 37 7	3 29 50 47	10 8 42 16	3

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

FEBRUARI.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfis Quanti. Min.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	
1	1	1	38	50	0	3	59	36	5	20	9	51	11	0	16	32	
2	7	25	8	11	3	15	22	6	7	10	28	54	11	21	50	48	
3	2	18	37	31	6	26	44	35	9	0	47	58	0	13	25	4	
4	9	12	6	51	10	8	7	4	10	21	7	1	1	4	59	20	
5	4	5	36	12	1	19	29	33	0	11	26	4	1	26	33	36	
6	10	29	5	32	5	0	52	3	2	1	45	8	2	18	7	52	
7	5	22	34	52	8	12	14	32	3	22	4	11	3	9	42	8	
8	0	16	4	13	11	23	37	1	5	12	23	15	4	1	16	24	
9	7	9	33	33	3	4	59	30	7	2	42	18	4	22	50	40	
10	2	3	2	53	6	16	22	0	8	23	1	21	5	14	24	56	
11	8	26	32	14	9	27	44	29	10	13	20	25	6	5	59	12	4
12	3	20	1	34	1	9	6	58	0	3	39	28	6	27	33	28	
13	10	13	30	54	4	20	29	27	1	23	58	32	7	19	7	44	
14	5	7	0	15	8	1	51	56	3	14	17	35	8	10	42	0	
15	0	0	29	35	11	13	14	26	5	4	36	38	9	2	16	16	
16	6	23	58	55	2	24	36	55	6	24	55	42	9	23	50	32	
17	1	17	28	16	6	5	59	24	8	15	14	45	10	15	24	48	
18	8	10	57	36	9	17	21	54	10	5	33	49	11	6	59	4	
19	3	4	26	56	0	28	44	23	11	25	52	52	11	28	33	20	
20	9	27	56	17	4	10	6	52	1	16	11	56	0	20	7	36	
21	4	21	25	37	7	21	29	22	3	6	30	59	1	11	41	52	5
22	11	14	54	57	11	2	51	51	4	26	50	3	2	3	16	8	
23	6	8	24	18	2	14	14	20	6	17	9	7	2	24	50	24	
24	1	1	53	38	5	25	36	49	8	7	28	10	3	16	24	40	
25	7	25	22	58	9	6	59	19	9	27	47	13	4	7	58	56	
26	2	18	52	19	0	18	21	48	11	18	6	17	4	29	33	12	
27	9	12	21	39	3	29	44	17	1	8	25	20	5	21	7	28	
28	4	5	50	59	7	11	6	46	2	28	44	24	6	12	41	44	

In Anno Biflextili post Februarium adde unius
Diei Motum.

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

M A R T I I.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfis Quarti.
	s	o	i	''	s	o	i	''	s	o	i	''	s	o	i	''	Min.
1	10	29	20	20	10	22	29	16	4	19	3	27	7	4	16	0	6
2	5	22	49	40	2	3	51	45	6	9	22	30	7	25	50	16	
3	0	16	19	0	5	15	14	14	7	29	41	34	8	17	24	32	
4	7	9	48	21	8	26	36	44	9	20	0	37	9	8	58	48	
5	2	3	17	41	0	7	59	13	11	10	19	41	10	0	33	4	
6	8	26	47	1	3	19	21	42	1	0	38	44	10	22	7	20	
7	3	20	16	22	7	0	44	12	2	20	57	47	11	13	41	36	
8	10	13	45	42	10	12	6	41	4	11	16	51	0	5	15	52	
9	5	7	15	2	1	23	29	10	6	1	35	54	0	26	50	8	
10	0	0	44	23	5	4	51	39	7	21	54	58	1	18	24	24	
11	6	24	13	43	8	16	14	8	9	12	14	1	2	9	58	40	7
12	1	17	43	3	11	27	36	38	11	2	33	5	3	1	32	56	
13	8	11	12	24	3	8	59	7	0	22	52	8	3	23	7	12	
14	3	4	41	44	6	20	21	36	2	13	11	12	4	14	41	28	
15	9	28	11	4	10	1	44	5	4	3	30	15	5	6	15	44	
16	4	21	40	25	1	13	6	35	5	23	49	19	5	27	50	0	
17	11	15	9	45	4	24	29	4	7	14	8	23	6	19	24	16	
18	6	8	39	5	8	5	51	33	9	4	27	26	7	10	58	32	
19	1	2	8	26	11	17	14	2	10	24	46	29	8	2	32	48	
20	7	25	37	46	2	28	36	32	0	15	5	33	8	24	7	4	
21	2	19	7	6	6	9	59	1	2	5	24	36	9	15	41	20	8
22	9	12	36	27	9	21	21	30	3	25	43	39	10	7	15	36	
23	4	6	5	47	1	2	43	59	5	16	2	43	10	28	49	52	
24	10	29	35	7	4	14	6	29	7	6	21	46	11	20	24	8	
25	5	23	4	28	7	25	28	58	8	26	40	50	0	11	58	24	
26	0	16	33	48	11	6	51	27	10	16	59	53	1	3	32	40	
27	7	10	3	8	2	18	13	57	0	7	18	57	1	25	6	56	
28	2	3	32	29	5	29	36	26	1	27	38	0	2	16	41	12	
29	8	27	1	49	9	10	58	55	3	17	57	4	3	8	15	28	
30	3	20	31	9	0	22	21	24	5	8	16	7	3	29	49	44	
31	10	14	0	30	4	3	43	54	6	28	35	11	4	21	24	0	

MEDIA MOTUS SATELLITUM JOVIS
AD DIES MENSIS

A P R I L I S.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	s	o	i	II	s	o	i	II	s	o	i	II	s	o	i	II	Min.
1	5	7	29	50	7	15	6	23	8	18	54	14	5	12	58	16	9
2	0	0	59	10	10	26	28	52	10	9	13	18	6	4	32	32	
3	6	24	28	31	2	7	51	21	11	29	32	21	6	26	6	48	
4	1	17	57	51	5	19	13	51	1	19	51	24	7	17	41	4	
5	8	11	27	11	9	0	36	20	3	10	10	28	8	9	15	20	
6	3	4	56	32	0	11	58	49	5	0	29	31	9	0	49	36	
7	9	28	25	52	3	23	21	18	6	20	48	35	9	22	23	52	
8	4	21	55	12	7	4	43	47	8	11	7	38	10	13	58	8	
9	11	15	24	33	10	16	6	17	10	1	26	42	11	5	32	24	
10	6	8	53	53	1	27	28	46	11	21	45	45	11	27	6	40	
11	1	2	23	13	5	8	51	15	1	12	4	49	0	18	40	56	10
12	7	25	52	34	8	20	13	44	3	2	23	52	1	10	15	12	
13	2	19	21	54	0	1	36	14	4	22	42	55	2	1	49	28	
14	9	12	51	14	3	12	58	43	6	13	1	59	2	23	23	44	
15	4	6	20	35	6	24	21	12	8	3	21	2	3	14	58	0	
16	10	29	49	55	10	5	43	41	9	23	40	6	4	6	32	16	
17	5	23	19	15	1	17	6	11	11	13	59	9	4	28	6	32	
18	0	16	48	36	4	28	28	40	1	4	18	13	5	19	40	48	
19	7	10	17	56	8	9	51	9	2	24	37	16	6	11	15	4	
20	2	3	47	16	11	21	13	38	4	14	56	20	7	2	49	20	
21	8	27	16	37	3	2	36	8	6	5	15	23	7	24	23	36	11
22	3	20	45	57	6	13	58	37	7	25	34	27	8	15	57	52	
23	10	14	15	17	9	25	21	6	9	15	53	30	9	7	32	8	
24	5	7	44	38	1	6	43	35	11	6	12	33	9	29	6	24	
25	0	1	13	58	4	18	6	5	0	26	31	37	10	20	40	40	
26	6	24	43	18	7	29	28	34	2	16	50	40	11	12	14	56	
27	1	18	12	39	11	10	51	3	4	7	9	44	0	3	49	12	
28	8	11	41	59	2	22	13	33	5	27	28	47	0	25	23	28	
29	3	5	11	19	6	3	36	2	7	17	47	51	1	16	57	44	
30	9	28	40	40	9	14	58	31	9	8	6	54	2	8	32	0	

MEDII MOTVS SATELLITVM IOVIS
AD DIES MENSIS

M A I I.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfide Quarti.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	Min.
1	4	22	10	0	0	26	21	0	10	28	25	57	3	0	6	16	12
2	II	15	39	20	4	7	43	30	0	18	45	0	3	21	40	32	
3	6	9	8	41	7	19	5	59	2	9	4	4	4	13	14	48	
4	I	2	38	I	II	0	28	28	3	29	23	8	5	4	49	4	
5	7	26	7	21	2	11	50	57	5	19	42	11	5	26	23	20	
6	2	19	36	42	5	23	13	27	7	10	1	15	6	17	57	36	13
7	9	13	6	2	9	4	35	56	9	0	20	18	7	9	31	52	
8	4	6	35	22	0	15	58	25	10	20	39	22	8	1	6	8	
9	II	0	4	43	3	27	20	54	0	10	58	25	8	22	40	24	
10	5	23	34	3	7	8	43	24	2	1	17	29	9	14	14	40	
11	0	17	3	23	10	20	5	53	3	21	36	32	10	5	48	56	14
12	7	10	32	44	2	1	28	22	5	11	55	36	10	27	23	12	
13	2	4	2	4	5	12	50	52	7	2	14	39	11	18	57	28	
14	8	27	31	24	8	24	13	21	8	22	33	42	0	10	31	44	
15	3	21	0	45	0	5	35	50	10	12	52	46	1	2	6	0	
16	10	14	30	5	3	16	58	19	0	3	11	49	1	23	40	16	15
17	5	7	59	25	6	28	20	49	1	23	30	52	2	15	14	32	
18	0	1	28	46	10	9	43	18	3	13	49	56	3	6	48	48	
19	6	24	58	6	1	21	5	47	5	4	9	0	3	28	23	4	
20	1	18	27	26	5	2	28	16	6	24	28	3	4	19	57	20	
21	8	11	56	47	8	13	50	46	8	14	47	7	5	11	31	36	16
22	3	5	26	7	11	25	13	15	10	5	6	10	6	3	5	52	
23	9	28	55	27	3	6	35	44	11	25	25	14	6	24	40	8	
24	4	22	24	48	6	17	58	13	1	15	44	17	7	16	14	24	
25	II	15	54	8	9	29	20	43	3	6	3	21	8	7	48	40	
26	6	9	23	28	1	10	43	12	4	26	22	24	8	29	22	56	17
27	1	2	52	49	4	22	5	41	6	16	41	28	9	20	57	12	
28	7	26	22	9	8	3	28	11	8	7	0	31	10	12	31	28	
29	2	19	51	29	11	14	50	40	9	27	19	35	11	4	5	44	
30	9	13	20	50	2	26	13	9	11	17	38	38	11	25	40	0	
31	4	6	50	10	6	7	35	38	1	7	57	41	0	17	14	16	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

J U N I I.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	Min.
1	II	0	19	30	9	18	58	8	2	28	16	44	1	8	48	32	15
2	5	23	48	51	1	0	20	37	4	18	35	48	2	0	22	48	
3	0	17	18	11	4	11	43	6	6	8	54	51	2	21	57	4	
4	7	10	47	31	7	23	5	35	7	29	13	55	3	13	31	20	
5	2	4	16	52	11	4	28	5	9	19	32	58	4	5	5	36	
6	8	27	46	12	2	15	50	34	11	9	52	2	4	26	39	52	
7	3	21	15	32	5	27	13	3	1	0	11	5	5	18	14	8	
8	10	14	44	53	9	8	35	32	2	20	30	9	6	9	48	24	
9	5	8	14	13	0	19	58	1	4	10	49	12	7	1	22	40	
10	0	1	43	33	4	1	20	31	6	1	8	16	7	22	56	56	
11	6	25	12	54	7	12	43	0	7	21	27	19	8	14	31	12	16
12	1	18	42	14	10	24	5	29	9	11	46	23	9	6	5	28	
13	8	12	11	34	2	5	27	59	11	2	5	26	9	27	39	44	
14	3	5	40	55	5	16	50	28	0	22	24	30	10	19	14	0	
15	9	29	10	15	8	28	12	57	2	12	43	33	11	10	48	16	
16	4	22	39	35	0	9	35	26	4	3	2	36	0	2	22	32	
17	11	16	8	56	3	20	57	56	5	23	21	40	0	23	56	48	
18	6	9	38	16	7	2	20	25	7	13	40	43	1	15	31	4	
19	1	3	7	36	10	13	42	54	9	3	59	46	2	7	5	20	
20	7	26	36	57	1	25	5	23	10	24	18	50	2	28	39	36	
21	2	20	6	17	5	6	27	53	0	14	37	53	3	20	13	52	17
22	9	13	35	37	8	17	50	22	2	4	56	56	4	11	48	8	
23	4	7	4	58	11	29	12	51	3	25	16	0	5	3	22	24	
24	11	0	34	18	3	10	35	20	5	15	35	3	5	24	56	40	
25	5	24	3	38	6	21	57	50	7	5	54	7	6	16	30	56	
26	0	17	32	59	10	3	20	19	8	26	13	11	7	8	5	12	
27	7	11	2	19	1	14	42	48	10	16	32	14	7	29	39	28	
28	2	4	31	39	4	26	5	17	0	6	51	18	8	21	13	44	
29	8	28	0	59	8	7	27	47	1	27	10	21	9	12	48	0	
30	3	21	30	20	11	18	50	16	3	17	29	25	10	4	22	16	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

JULII.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	s	o	i	II	s	o	i	II	s	o	i	II	s	o	i	II	Min.
1	10	14	59	40	3	0	12	45	5	7	48	28	10	25	56	32	18
2	5	8	29	0	6	11	35	14	6	28	7	31	11	17	30	48	
3	0	1	58	20	9	22	57	44	8	18	26	35	0	9	5	4	
4	6	25	27	40	1	4	20	13	10	8	45	38	1	0	39	20	
5	1	18	57	1	4	15	42	42	11	29	4	42	1	22	13	36	
6	8	12	26	21	7	27	5	11	1	19	23	45	2	13	47	52	
7	3	5	55	41	11	8	27	41	3	9	42	49	3	5	22	8	
8	9	29	25	2	2	19	50	10	5	0	1	52	3	26	56	24	
9	4	22	54	22	6	1	12	39	6	20	20	55	4	18	30	40	
10	11	16	23	42	9	12	35	9	8	10	39	59	5	10	4	56	
11	6	9	53	3	0	23	57	38	10	0	59	2	6	1	39	12	19
12	1	3	22	23	4	5	20	7	11	21	18	6	6	23	13	28	
13	7	26	51	43	7	16	42	36	1	11	37	9	7	14	47	44	
14	2	20	21	4	10	28	5	6	3	1	56	13	8	6	22	0	
15	9	13	50	24	2	9	27	35	4	22	15	16	8	27	56	16	
16	4	7	19	44	5	20	50	4	6	12	34	19	9	19	30	32	
17	11	0	49	5	9	2	12	33	8	2	53	23	10	11	4	48	
18	5	24	18	25	0	13	35	3	9	23	12	27	11	2	39	4	
19	0	17	47	45	3	24	57	32	11	13	31	30	11	24	13	20	
20	7	11	17	6	7	6	20	1	1	3	50	34	0	15	47	36	
21	2	4	46	26	10	17	42	30	2	24	9	37	1	7	21	52	20
22	8	28	15	46	1	29	5	0	4	14	28	41	1	28	56	8	
23	3	21	45	7	5	10	27	29	6	4	47	44	2	20	30	24	
24	10	15	14	27	8	21	49	58	7	25	6	48	3	12	4	40	
25	5	8	43	47	0	3	12	28	9	15	25	51	4	3	38	56	
26	0	2	13	8	3	14	34	57	11	5	44	54	4	25	13	12	
27	6	25	42	28	6	25	57	26	0	26	3	58	5	16	47	28	
28	1	19	11	48	10	7	19	55	2	16	23	1	6	8	21	44	
29	8	12	41	9	1	18	42	25	4	6	42	4	6	29	56	0	
30	3	6	10	29	5	0	4	54	5	27	1	8	7	21	30	16	
31	9	29	39	49	8	11	27	23	7	17	20	12	8	13	4	32	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

2 AUGUSTI 2

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	Min.
1	4	23	9	10	II	22	49	52	9	7	39	16	9	4	38	48	21
2	II	16	38	30	3	4	12	22	10	27	58	19	9	26	13	4	
3	6	10	7	50	6	15	34	51	0	18	17	22	10	17	47	20	
4	I	3	37	II	9	26	57	20	2	8	36	26	II	9	21	36	
5	7	27	6	31	I	8	19	49	3	28	55	29	0	0	55	52	
6	2	20	35	51	4	19	42	18	5	19	14	33	0	22	30	8	
7	9	14	5	12	8	I	4	48	7	9	33	36	I	14	4	24	
8	4	7	34	32	II	12	27	17	8	29	52	39	2	5	38	40	
9	II	I	3	52	2	23	49	46	10	20	11	43	2	27	12	56	
10	5	24	33	13	6	5	12	16	0	10	30	46	3	18	47	12	
11	0	18	2	33	9	16	34	45	2	0	49	50	4	10	21	28	22
12	7	II	31	53	0	27	57	14	3	21	8	53	5	I	55	44	
13	2	5	I	14	4	9	19	43	5	11	27	56	5	23	30	0	
14	8	28	30	34	7	20	42	13	7	I	47	0	6	15	4	16	
15	3	21	59	54	II	2	4	42	8	22	6	3	7	6	38	32	
16	10	15	29	15	2	13	27	II	10	12	25	7	7	28	12	48	
17	5	8	58	35	5	24	49	41	0	2	44	10	8	19	47	4	
18	0	2	27	55	9	6	12	10	I	23	3	14	9	11	21	20	
19	6	25	57	16	0	17	34	39	3	13	22	17	10	2	55	36	
20	I	19	26	36	3	28	57	8	5	3	41	21	10	24	29	52	
21	8	12	55	56	7	10	19	38	6	24	0	24	II	16	4	8	
22	3	6	25	17	10	21	42	7	8	14	19	28	0	7	38	24	23
23	9	29	54	37	2	3	4	36	10	4	38	31	0	29	12	40	
24	4	23	23	57	5	14	27	5	II	24	57	35	I	20	46	56	
25	II	16	53	18	8	25	49	35	I	15	16	38	2	12	21	12	
26	6	10	22	38	0	7	12	4	3	5	35	42	3	3	55	28	
27	I	3	51	58	3	18	34	33	4	25	54	45	3	25	29	44	
28	7	27	21	19	6	29	57	2	6	16	13	48	4	17	4	0	
29	2	20	50	39	10	11	19	32	8	6	32	52	5	8	38	16	
30	9	14	19	59	I	22	42	I	9	26	51	55	6	0	12	32	
31	4	7	49	20	5	4	4	30	II	17	10	59	6	21	46	48	

D d d d

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

S E P T E M B R I S.

Die Men- fis.	Primi	Secundi	Tertii	Quarti	Motus Apfidis Quarti.
	S O I II	S O I II	S O I II	S O I II	Min.
1	II I 18 40	8 15 26 59	I 7 30 2	7 13 21 4	24
2	5 24 48 0	II 26 49 29	2 27 49 5	8 4 55 20	
3	0 18 17 21	3 8 11 58	4 18 8 9	8 26 29 36	
4	7 11 46 41	6 19 34 27	6 8 27 12	9 18 3 52	
5	2 5 16 1	10 0 56 57	7 28 46 16	10 9 38 8	
6	8 28 45 22	I 12 19 26	9 19 5 19	II I 12 24	
7	3 22 14 42	4 23 41 55	II 9 24 23	II 22 46 40	
8	10 15 44 2	8 5 4 24	0 29 43 26	0 14 20 56	
9	5 9 13 23	II 16 26 54	2 20 2 30	I 5 55 12	
10	0 2 42 43	2 27 49 23	4 10 21 33	I 27 29 28	
11	6 26 12 3	6 9 11 52	6 0 40 37	2 19 3 44	25
12	I 19 41 24	9 20 34 21	7 20 59 40	3 10 38 0	
13	8 13 10 44	I I 56 51	9 11 18 44	4 2 12 16	
14	3 6 40 4	4 13 19 20	II I 37 47	4 23 46 32	
15	10 0 9 25	7 24 41 49	0 21 56 51	5 15 20 48	
16	4 23 38 45	II 6 4 18	2 12 15 54	6 6 55 4	
17	II 17 8 5	2 17 26 48	4 2 34 57	6 28 29 20	
18	6 10 37 26	5 28 49 17	5 22 54 0	7 20 3 36	
19	I 4 6 46	9 10 11 46	7 13 13 4	8 11 37 52	
20	7 27 36 6	0 21 34 15	9 3 32 7	9 3 12 8	
21	2 21 5 27	4 2 56 45	10 23 51 11	9 24 46 24	26
22	9 14 34 47	7 14 19 14	0 14 10 14	10 16 20 40	
23	4 8 4 7	10 25 41 43	2 4 29 18	II 7 54 56	
24	II 1 33 28	2 7 4 12	3 24 48 21	II 29 29 12	
25	5 25 2 48	5 18 26 42	5 15 7 25	0 21 3 28	
26	0 18 32 8	8 29 49 11	7 5 26 28	I 12 37 44	
27	7 12 1 29	0 11 11 40	8 25 45 32	2 4 12 0	
28	2 5 30 49	3 22 34 9	10 16 4 35	2 25 46 16	
29	8 29 0 9	7 3 56 39	0 6 23 39	3 17 20 32	
30	3 22 29 30	10 15 19 8	I 26 42 42	4 8 54 48	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

O C T O B R I S.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	Min.
1	10	15	58	50	1	26	41	37	3	17	1	46	5	0	29	4	27
2	5	9	28	10	5	8	4	6	5	7	20	49	5	22	3	20	
3	0	2	57	31	8	19	26	36	6	27	39	53	6	13	37	36	
4	6	26	26	51	0	0	49	5	8	17	58	56	7	5	11	52	
5	1	19	56	11	3	12	11	34	10	8	18	0	7	26	46	8	
6	8	13	25	32	6	23	34	4	11	28	37	3	8	18	20	24	
7	3	6	54	52	10	4	56	33	1	18	56	6	9	9	54	40	
8	10	0	24	12	1	16	19	2	3	9	15	10	10	1	28	56	
9	4	23	53	33	4	27	41	31	4	29	34	13	10	23	3	12	
10	11	17	22	53	8	9	4	1	6	19	53	17	11	14	37	28	
11	6	10	52	13	11	20	26	30	8	10	12	20	0	6	11	44	28
12	1	4	21	34	3	1	48	59	10	0	31	24	0	27	46	0	
13	7	27	50	54	6	13	11	28	11	20	50	27	1	19	20	16	
14	2	21	20	14	9	24	33	58	1	11	9	31	2	10	54	32	
15	9	14	49	35	1	5	56	27	3	1	28	34	3	2	28	48	
16	4	8	18	55	4	17	18	56	4	21	47	38	3	24	3	4	
17	11	1	48	15	7	28	41	25	6	12	6	41	4	15	37	20	
18	5	25	17	36	11	10	3	55	8	2	25	45	5	7	11	36	
19	0	18	46	56	2	21	26	24	9	22	44	48	5	28	45	52	
20	7	12	16	16	6	2	48	53	11	13	3	51	6	20	20	8	
21	2	5	45	37	9	14	11	22	1	3	22	65	7	11	54	24	29
22	8	29	14	57	0	25	33	52	2	23	41	58	8	3	28	40	
23	3	22	44	17	4	6	56	21	4	14	1	2	8	25	2	56	
24	10	16	13	38	7	18	18	50	6	4	20	5	9	16	37	12	
25	5	9	42	58	10	29	41	19	7	24	39	8	10	8	11	28	
26	0	3	12	18	2	11	3	49	9	14	58	12	10	29	45	44	
27	6	26	41	39	5	22	26	18	11	5	17	15	11	21	20	0	
28	1	20	10	59	9	3	48	47	0	25	36	19	0	12	54	16	
29	8	13	40	19	0	15	11	17	2	15	55	22	1	4	28	32	
30	3	7	9	40	3	26	33	46	4	6	14	26	1	26	2	48	
31	10	0	39	0	7	7	56	15	5	26	33	29	2	17	37	4	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

NOVEMBRIS.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apfidis Quarti.
	s	o	i	II	s	o	i	II	s	o	i	II	s	o	i	II	Min.
1	4	24	8	20	10	19	18	44	7	16	52	33	3	9	11	20	30
2	11	17	37	41	2	0	41	14	9	7	11	36	4	0	45	36	
3	6	11	7	1	5	12	3	43	10	27	30	40	4	22	19	52	
4	1	4	36	21	8	23	26	12	0	17	49	43	5	13	54	8	
5	7	28	5	42	0	4	48	41	2	8	8	47	6	5	28	24	
6	2	21	35	2	3	16	11	11	3	28	27	50	6	27	2	40	
7	9	15	4	22	6	27	33	40	5	18	46	54	7	18	36	56	
8	4	8	33	43	10	8	56	9	7	9	5	57	8	10	11	12	
9	11	2	3	3	1	20	18	38	8	29	25	0	9	1	45	28	
10	5	25	32	23	5	1	41	8	10	19	44	4	9	23	19	44	
11	0	19	1	44	8	13	3	37	0	10	3	7	10	14	54	0	31
12	7	12	31	4	11	24	26	6	2	0	22	11	11	6	28	16	
13	2	6	0	24	3	5	48	35	3	20	41	14	11	28	2	32	
14	8	29	29	45	6	17	11	5	5	11	0	17	0	19	36	48	
15	3	22	59	5	9	28	33	34	7	1	19	21	1	11	11	4	
16	10	16	28	25	1	9	56	3	8	21	38	24	2	2	45	20	
17	5	9	57	46	4	21	18	32	10	11	57	28	2	24	19	36	
18	0	3	27	6	8	2	41	2	0	2	16	31	3	15	53	52	
19	6	26	56	26	11	14	3	31	1	22	35	35	4	7	28	8	
20	1	20	25	47	2	25	26	0	3	12	54	38	4	29	2	24	
21	8	13	55	7	6	6	48	30	5	3	13	42	5	20	36	40	32
22	3	7	24	27	9	18	10	59	6	23	32	45	6	12	10	56	
23	10	0	53	48	0	29	33	28	8	13	51	49	7	3	45	12	
24	4	24	23	8	4	10	55	57	10	4	10	52	7	25	19	28	
25	11	17	52	28	7	22	18	27	11	24	29	56	8	16	53	44	
26	6	11	21	49	11	3	40	56	1	14	48	59	9	8	28	0	
27	1	4	51	9	2	15	3	25	3	5	8	3	10	0	2	16	
28	7	28	20	29	5	26	25	54	4	25	27	6	10	21	36	32	
29	2	21	49	50	9	7	48	24	6	15	46	9	11	13	10	48	
30	9	15	19	10	0	19	10	53	8	6	5	13	0	4	45	4	

MEDII MOTUS SATELLITUM JOVIS
AD DIES MENSIS

DECEMBRIS.

Die Men- fis.	Primi				Secundi				Tertii				Quarti				Motus Apsidis Quarti.
	S	O	I	II	S	O	I	II	S	O	I	II	S	O	I	II	Min.
1	4	8	48	30	4	0	33	22	9	26	24	16	0	26	19	20	33
2	II	2	17	51	7	II	55	52	II	16	43	20	I	17	53	36	
3	5	25	47	II	10	23	18	21	I	7	2	23	2	9	27	52	
4	0	19	16	31	2	4	40	50	2	27	21	26	3	I	2	8	
5	7	12	45	52	5	16	3	19	4	17	40	30	3	22	36	24	
6	2	6	15	12	8	27	25	49	6	7	59	33	4	14	10	40	
7	8	29	44	32	0	8	48	18	7	28	18	37	5	5	44	56	
8	3	23	13	53	3	20	10	47	9	18	37	40	5	27	19	12	
9	10	16	43	13	7	I	33	16	II	8	56	44	6	18	53	28	
10	5	10	12	33	10	12	55	46	0	29	15	47	7	10	27	44	
11	0	3	41	54	I	24	18	15	2	19	34	51	8	2	2	0	34
12	6	27	11	14	5	5	40	44	4	9	53	54	8	23	36	16	
13	I	20	40	34	8	17	3	14	6	0	12	58	9	15	10	32	
14	8	14	9	55	II	28	25	43	7	20	32	I	10	6	44	48	
15	3	7	39	15	3	9	48	12	9	10	51	5	10	28	19	4	
16	10	I	8	35	6	21	10	41	II	I	10	8	11	19	53	20	
17	4	24	37	56	10	2	33	11	0	21	29	12	0	11	27	36	
18	II	18	7	16	I	13	55	40	2	11	48	15	I	3	I	52	
19	6	11	36	36	4	25	18	9	4	2	7	18	I	24	36	8	
20	I	5	5	57	8	6	40	38	5	22	26	22	2	16	10	24	
21	7	28	35	17	II	18	3	8	7	12	45	25	3	7	44	40	35
22	2	22	4	37	2	29	25	37	9	3	4	29	3	29	18	56	
23	9	15	33	58	6	10	48	6	10	23	23	32	4	20	53	12	
24	4	9	3	18	9	22	10	35	0	13	42	36	5	12	27	28	
25	II	2	32	38	I	3	33	5	2	4	I	39	6	4	I	44	
26	5	26	I	58	4	14	55	34	3	24	20	43	6	25	36	0	
27	0	19	31	18	7	26	18	3	5	14	39	47	7	17	10	16	
28	7	13	0	38	II	7	40	32	7	4	58	50	8	8	44	32	
29	2	6	29	59	2	19	3	2	8	25	17	53	9	0	18	48	
30	8	29	59	19	6	0	25	31	10	15	36	57	9	21	53	4	
31	3	23	28	40	9	II	48	0	0	5	56	0	10	13	27	20	36

MEDII MOTUS SATELLITUM JOVIS
IN ANNORUM CENTURIIS.

Annis Colle- ctis.	Primi	Secundi	Tertii	Quarti
	S O I //	S O I //	S O I //	S O I //
100	7 25 0 0	3 24 22 30	1 21 31 40	6 24 50 0
200	3 20 0 0	7 18 45 0	3 13 3 20	1 19 40 0
300	11 15 0 0	11 13 7 30	5 4 35 0	8 14 30 0

In centum autem Annis progreditur Apsis Quarti duo Signa.

IN HORIS.

H.	S O I //	S O I //	S O I //	S O I //
1	0 8 28 43	0 4 13 26	0 2 5 48	0 0 53 56
2	0 16 57 27	0 8 26 52	0 4 11 35	0 1 47 52
3	0 25 26 10	0 12 40 18	0 6 17 23	0 2 41 47
4	1 3 54 53	0 16 53 44	0 8 23 11	0 3 35 43
5	1 12 23 37	0 21 7 10	0 10 28 58	0 4 29 39
6	1 20 52 20	0 25 20 37	0 12 34 46	0 5 23 34
7	1 29 21 3	0 29 34 3	0 14 40 34	0 6 17 30
8	2 7 49 47	1 3 47 29	0 16 46 21	0 7 11 26
9	2 16 18 30	1 8 0 55	0 18 52 9	0 8 5 21
10	2 24 47 13	1 12 14 21	0 20 57 56	0 8 59 17
11	3 3 15 57	1 16 27 47	0 23 3 44	0 9 53 13
12	3 11 44 40	1 20 41 14	0 25 9 32	0 10 47 8
13	3 20 13 23	1 24 54 40	0 27 15 20	0 11 41 4
14	3 28 42 7	1 29 8 6	0 29 21 7	0 12 35 0
15	4 7 10 50	2 3 21 32	1 1 26 55	0 13 28 55
16	4 15 39 33	2 7 34 58	1 3 32 43	0 14 22 51
17	4 24 8 17	2 11 48 24	1 5 38 30	0 15 16 47
18	5 2 37 0	2 16 1 51	1 7 44 18	0 16 10 42
19	5 11 5 43	2 20 15 17	1 9 50 6	0 17 4 38
20	5 19 34 27	2 24 28 43	1 11 55 53	0 17 58 34
21	5 28 3 10	2 28 42 9	1 14 1 41	0 18 52 29
22	6 6 31 53	3 2 55 35	1 16 7 28	0 19 46 25
23	6 15 0 37	3 7 9 1	1 18 13 16	0 20 40 21
24	6 23 29 20	3 11 22 28	1 20 19 3	0 21 34 16

MEDII MOTUS SATELLITUM JOVIS
IN MINUTIS HORARIIS.

	Primi				Secundi				Tertii				Quarti					Primi				Secundi				Tertii				Quarti			
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>		<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>		<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>
1	0	8	29		0	4	13		0	2	6		0	54			31	4	22	50		2	10	57		1	5	0		27	52		
2	0	16	57		0	8	27		0	4	12		1	48			32	4	31	19		2	15	10		1	7	6		28	46		
3	0	25	26		0	12	40		0	6	17		2	42			33	4	39	48		2	19	24		1	9	11		29	40		
4	0	33	55		0	16	54		0	8	23		3	36			34	4	48	17		2	23	37		1	11	17		30	33		
5	0	42	24		0	21	7		0	10	29		4	30			35	4	56	45		2	27	50		1	13	23		31	27		
6	0	50	52		0	25	21		0	12	35		5	24			36	5	5	14		2	32	4		1	15	29		32	21		
7	0	59	21		0	29	34		0	14	41		6	18			37	5	13	43		2	36	17		1	17	35		33	15		
8	1	7	50		0	33	47		0	16	46		7	11			38	5	22	11		2	40	31		1	19	40		34	9		
9	1	16	18		0	38	1		0	18	52		8	5			39	5	30	40		2	44	44		1	21	46		35	3		
10	1	24	47		0	42	14		0	20	58		8	59			40	5	39	9		2	48	57		1	23	52		35	57		
11	1	33	16		0	46	28		0	23	4		9	53			41	5	47	38		2	53	11		1	25	58		36	51		
12	1	41	45		0	50	41		0	25	10		10	47			42	5	56	6		2	57	24		1	28	4		37	45		
13	1	50	13		0	54	55		0	27	15		11	41			43	6	4	35		3	1	38		1	30	9		38	39		
14	1	58	42		0	59	8		0	29	21		12	35			44	6	13	4		3	5	51		1	32	15		39	33		
15	2	7	11		1	3	22		0	31	27		13	29			45	6	21	32		3	10	5		1	34	21		40	27		
16	2	15	40		1	7	35		0	33	33		14	23			46	6	30	1		3	14	18		1	36	27		41	21		
17	2	24	8		1	11	48		0	35	39		15	17			47	6	38	30		3	18	32		1	38	33		42	15		
18	2	32	37		1	16	2		0	37	44		16	11			48	6	46	59		3	22	45		1	40	38		43	9		
19	2	41	6		1	20	15		0	39	50		17	5			49	6	55	27		3	26	59		1	42	44		44	2		
20	2	49	34		1	24	29		0	41	56		17	59			50	7	3	56		3	31	12		1	44	50		44	56		
21	2	58	3		1	28	42		0	44	2		18	52			51	7	12	25		3	35	25		1	46	56		45	50		
22	3	6	32		1	32	56		0	46	7		19	46			52	7	20	54		3	39	39		1	49	2		46	44		
23	3	15	1		1	37	9		0	48	13		20	40			53	7	29	22		3	43	52		1	51	7		47	38		
24	3	23	29		1	41	22		0	50	19		21	34			54	7	37	51		3	48	6		1	53	13		48	32		
25	3	31	58		1	45	36		0	52	25		22	28			55	7	46	20		3	52	19		1	55	19		49	26		
26	3	40	27		1	49	49		0	54	31		23	22			56	7	54	48		3	56	32		1	57	25		50	20		
27	3	48	55		1	54	3		0	56	37		24	16			57	8	3	17		4	0	46		1	59	31		51	14		
28	3	57	24		1	58	16		0	58	42		25	10			58	8	11	46		4	4	59		2	1	36		52	8		
29	4	5	53		2	2	30		1	0	48		26	4			59	8	20	15		4	9	13		2	3	42		53	2		
30	4	14	22		2	6	43		1	2	54		26	58			60	8	28	43		4	13	26		2	5	48		53	56		

*TABULA TEMPORIS MEDIO PRIMI SATELLITIS
à JOVE MOTUI CONGRUENTIS.*

Sig. 0.				Sig. I.				Sig. II.			Sig. III.			Sig. IV.			Sig. V.		
H. /				H. /				H. /			H. /			H. /			H. /		
0	0	0	0	30	3	32	23	7	4	46	10	37	9	14	9	32	17	41	55
1	0	7	5	31	3	39	28	7	11	51	10	44	14	14	16	37	17	49	0
2	0	14	10	32	3	46	33	7	18	56	10	51	19	14	23	42	17	56	5
3	0	21	14	33	3	53	37	7	26	0	10	58	23	14	30	46	18	3	9
4	0	28	19	34	4	0	42	7	33	5	11	5	28	14	37	51	18	10	14
5	0	35	24	35	4	7	47	7	40	10	11	12	33	14	44	56	18	17	19
6	0	42	29	36	4	14	52	7	47	15	11	19	38	14	52	1	18	24	24
7	0	49	33	37	4	21	56	7	54	19	11	26	42	14	59	5	18	31	28
8	0	56	38	38	4	29	1	8	1	24	11	33	47	15	6	10	18	38	33
9	1	3	43	39	4	36	6	8	8	29	11	40	52	15	13	15	18	45	38
10	1	10	48	40	4	43	11	8	15	34	11	47	57	15	20	20	18	52	43
11	1	17	52	41	4	50	15	8	22	38	11	55	1	15	27	24	18	59	47
12	1	24	57	42	4	57	20	8	29	43	12	2	6	15	34	29	19	6	52
13	1	32	2	43	5	4	25	8	36	48	12	9	11	15	41	34	19	13	57
14	1	39	7	44	5	11	30	8	43	53	12	16	16	15	48	39	19	21	2
15	1	46	12	45	5	18	35	8	50	58	12	23	21	15	55	44	19	28	7
16	1	53	16	46	5	25	39	8	58	2	12	30	25	16	2	48	19	35	11
17	2	0	21	47	5	32	44	9	5	7	12	37	30	16	9	53	19	42	16
18	2	7	26	48	5	39	49	9	12	12	12	44	35	16	16	58	19	49	21
19	2	14	31	49	5	46	54	9	19	17	12	51	40	16	24	3	19	56	26
20	2	21	35	50	5	53	58	9	26	21	12	58	44	16	31	7	20	3	30
21	2	28	40	51	6	1	3	9	33	26	13	5	49	16	38	12	20	10	35
22	2	35	45	52	6	8	8	9	40	31	13	12	54	16	45	17	20	17	40
23	2	42	50	53	6	15	13	9	47	36	13	19	59	16	52	22	20	24	45
24	2	49	54	54	6	22	17	9	54	40	13	27	3	16	59	26	20	31	49
25	2	56	59	55	6	29	22	10	1	45	13	34	8	17	6	31	20	38	54
26	3	4	4	56	6	36	27	10	8	50	13	41	13	17	13	36	20	45	59
27	3	11	9	57	6	43	32	10	15	55	13	48	18	17	20	41	20	53	4
28	3	18	13	58	6	50	36	10	22	59	13	55	22	17	27	45	21	0	8
29	3	25	18	59	6	57	41	10	30	4	14	2	27	17	34	50	21	7	13
30	3	32	23	60	7	4	46	10	37	9	14	9	32	17	41	55	21	14	18

**TABULA TEMPORIS MEDIIS SATELLITUM
SECUNDI, TERTII ET QUARTI
MOTIBUS à JOVE CONGRUENTIS.**

	Secundi			Tertii			Quarti				Secundi			Tertii			Quarti		
"	"	'''		"	'''		"	'''		"	"	'''		"	'''		"	'''	
1	1	'''	'''	1	'''	'''	1	'''	'''	1	1	'''	'''	1	'''	'''	1	'''	'''
o.	H.	1	'''	H.	1	'''	H.	1	'''	o.	H.	1	'''	H.	1	'''	H.	1	'''
0	0	0	0	0	0	0	0	0	0	30	7	6	30	14	19	58	33	30	25
1	0	14	13	0	28	40	1	7	1	31	7	20	43	14	48	38	34	37	26
2	0	28	26	0	57	20	2	14	2	32	7	34	56	15	17	18	35	44	27
3	0	42	39	1	26	0	3	21	3	33	7	49	9	15	45	58	36	51	28
4	0	56	52	1	54	40	4	28	3	34	8	3	22	16	14	38	37	58	28
5	1	11	5	2	23	20	5	35	4	35	8	17	35	16	43	18	39	5	29
6	1	25	18	2	52	0	6	42	5	36	8	31	48	17	11	58	40	12	30
7	1	39	31	3	20	40	7	49	6	37	8	46	1	17	40	38	41	19	31
8	1	53	44	3	49	19	8	56	7	38	9	0	14	18	9	17	42	26	32
9	2	7	57	4	17	59	10	3	8	39	9	14	27	18	37	57	43	33	33
10	2	22	10	4	46	39	11	10	8	40	9	28	40	19	6	37	44	40	33
11	2	36	23	5	15	19	12	17	9	41	9	42	53	19	35	17	45	47	34
12	2	50	36	5	43	59	13	24	10	42	9	57	6	20	3	57	46	54	35
13	3	4	49	6	12	39	14	31	11	43	10	11	19	20	32	37	48	1	36
14	3	19	2	6	41	19	15	38	12	44	10	25	31	21	1	17	49	8	37
15	3	33	15	7	9	59	16	45	13	45	10	39	44	21	29	57	50	15	38
16	3	47	28	7	38	39	17	52	13	46	10	53	57	21	58	37	51	22	38
17	4	1	41	8	7	19	18	59	14	47	11	8	10	22	27	17	52	29	39
18	4	15	54	8	35	59	20	6	15	48	11	22	23	22	55	57	53	36	40
19	4	30	7	9	4	39	21	13	16	49	11	36	36	23	24	37	54	43	41
20	4	44	20	9	33	19	22	20	17	50	11	50	49	23	53	17	55	50	42
21	4	58	33	10	1	59	23	27	18	51	12	5	2	24	21	57	56	57	43
22	5	12	46	10	30	39	24	34	18	52	12	19	15	24	50	37	58	4	43
23	5	26	59	10	59	18	25	41	19	53	12	33	28	25	19	16	59	11	44
24	5	41	12	11	27	58	26	48	20	54	12	47	41	25	47	56	60	18	45
25	5	55	25	11	56	38	27	55	21	55	13	1	54	26	16	36	61	25	46
26	6	9	38	12	25	18	29	2	22	56	13	16	7	26	45	16	62	32	47
27	6	23	51	12	53	58	30	9	23	57	13	30	20	27	13	56	63	39	48
28	6	38	4	13	22	38	31	16	23	58	13	44	33	27	42	36	64	46	48
29	6	52	17	13	51	18	32	23	24	59	13	58	46	28	11	16	65	53	49
30	7	6	30	14	19	58	33	30	25	60	14	12	59	28	39	56	67	0	50

SEMIDURATIONES ECLIPSIUM SATELLITUM JOVIS.

Jovis a Nodo Satellitum Distantia.

Sig. O. VI.						Sig. I. VII.						Sig. II. VIII.							
Gr.	Sat. Primi			Secundi			Primi			Secundi			Primi			Secundi			Gr.
	H.	'	"	H.	'	"	H.	'	"	H.	'	"	H.	'	"	H.	'	"	
0	1	8	30	1	27	0	1	7	24	1	24	25	1	5	9	1	18	53	30
1	1	8	29	1	26	59	1	7	20	1	24	15	1	5	5	1	18	43	29
2	1	8	29	1	26	59	1	7	15	1	24	5	1	5	1	1	18	33	28
3	1	8	28	1	26	58	1	7	11	1	23	55	1	4	57	1	18	23	27
4	1	8	28	1	26	57	1	7	7	1	23	44	1	4	53	1	18	14	26
5	1	8	27	1	26	56	1	7	3	1	23	34	1	4	49	1	18	5	25
6	1	8	27	1	26	54	1	6	59	1	23	23	1	4	46	1	17	56	24
7	1	8	26	1	26	52	1	6	55	1	23	12	1	4	42	1	17	47	23
8	1	8	25	1	26	49	1	6	50	1	23	0	1	4	39	1	17	38	22
9	1	8	24	1	26	46	1	6	46	1	22	49	1	4	35	1	17	30	21
10	1	8	22	1	26	43	1	6	41	1	22	38	1	4	32	1	17	22	20
11	1	8	21	1	26	40	1	6	36	1	22	27	1	4	29	1	17	14	19
12	1	8	19	1	26	36	1	6	31	1	22	16	1	4	26	1	17	6	18
13	1	8	17	1	26	31	1	6	26	1	22	5	1	4	23	1	16	59	17
14	1	8	15	1	26	26	1	6	21	1	21	53	1	4	20	1	16	53	16
15	1	8	13	1	26	20	1	6	16	1	21	42	1	4	17	1	16	47	15
16	1	8	11	1	26	14	1	6	12	1	21	30	1	4	15	1	16	41	14
17	1	8	8	1	26	8	1	6	7	1	21	19	1	4	12	1	16	36	13
18	1	8	5	1	26	2	1	6	3	1	21	7	1	4	10	1	16	31	12
19	1	8	3	1	25	56	1	5	58	1	20	56	1	4	8	1	16	26	11
20	1	8	0	1	25	49	1	5	54	1	20	44	1	4	7	1	16	22	10
21	1	7	57	1	25	42	1	5	49	1	20	33	1	4	6	1	16	18	9
22	1	7	54	1	25	34	1	5	45	1	20	21	1	4	5	1	16	14	8
23	1	7	51	1	25	26	1	5	40	1	20	10	1	4	4	1	16	11	7
24	1	7	47	1	25	19	1	5	35	1	19	58	1	4	3	1	16	8	6
25	1	7	44	1	25	11	1	5	30	1	19	47	1	4	3	1	16	5	5
26	1	7	41	1	25	2	1	5	26	1	19	36	1	4	2	1	16	3	4
27	1	7	37	1	24	53	1	5	21	1	19	25	1	4	2	1	16	2	3
28	1	7	33	1	24	44	1	5	17	1	19	14	1	4	1	1	16	1	2
29	1	7	29	1	24	35	1	5	13	1	19	3	1	4	0	1	16	0	1
30	1	7	24	1	24	25	1	5	9	1	18	53	1	4	0	1	16	0	0
Sig. XI. V.						Sig. X. IV.						Sig. IX. III.							

SEMIDURATIONES ECLIPSIUM SATELLITUM JOVIS.

Jovis a Nodo Satellitum Distantia

Sig. O. VI.			Sig. I. VII.			Sig. II. VIII.		
Gr.	Sat. Tertii	Quarti	Tertii	Quarti		Tertii	Gr.	
	H. / //	H. / //	H. / //	H. / //		H. / //		
0	I 48 0	2 23 0	I 39 I	I 50 41		I 18 0	30	
1	I 47 59	2 22 56	I 38 26	I 48 25		I 17 17	29	
2	I 47 57	2 22 49	I 37 51	I 46 2		I 16 35	28	
3	I 47 53	2 22 38	I 37 15	I 43 33		I 15 53	27	
4	I 47 49	2 22 24	I 36 38	I 40 58		I 15 12	26	
5	I 47 43	2 22 5	I 36 0	I 38 17		I 14 31	25	
6	I 47 37	2 21 42	I 35 22	I 35 30		I 13 52	24	
7	I 47 29	2 21 15	I 34 43	I 32 36		I 13 14	23	
8	I 47 20	2 20 44	I 34 3	I 29 34		I 12 36	22	
9	I 47 9	2 20 8	I 33 22	I 26 24		I 11 59	21	
10	I 46 57	2 19 28	I 32 41	I 23 5		I 11 23	20	
11	I 46 44	2 18 44	I 31 59	I 19 37		I 10 48	19	
12	I 46 30	2 17 55	I 31 17	I 15 58		I 10 15	18	
13	I 46 14	2 17 2	I 30 35	I 12 8		I 9 44	17	
14	I 45 58	2 16 5	I 29 52	I 8 4		I 9 14	16	
15	I 45 40	2 15 4	I 29 8	I 3 43		I 8 45	15	
16	I 45 22	2 13 58	I 28 24	0 59 4		I 8 18	14	
17	I 45 2	2 12 48	I 27 40	0 54 0		I 7 52	13	
18	I 44 41	2 11 34	I 26 55	0 48 26		I 7 28	12	
19	I 44 18	2 10 15	I 26 10	0 42 12		I 7 5	11	
20	I 43 55	2 8 52	I 25 25	0 34 53		I 6 44	10	
21	I 43 30	2 7 25	I 24 40	0 25 36		I 6 25	9	
22	I 43 4	2 5 53	I 23 56	0 9 47		I 6 8	8	
23	I 42 37	2 4 16	I 23 11	0 0 0		I 5 53	7	
24	I 42 9	2 2 34	I 22 26			I 5 40	6	
25	I 41 40	2 0 48	I 21 41			I 5 28	5	
26	I 41 10	I 58 56	I 20 56			I 5 18	4	
27	I 40 39	I 57 0	I 20 12			I 5 10	3	
28	I 40 8	I 54 59	I 19 28			I 5 5	2	
29	I 39 35	I 52 52	I 18 44			I 5 2	1	
30	I 39 I	I 50 41	I 18 0			I 5 0	0	
Sig. XI. V.			Sig. X. IV.			Sig. IX. III.		

ÆQUATIONES LUMINIS ADDENDÆ.

Solis à Loco Jovis Heliocentrico Distantia.

Gr.	Sig. o.		I.		II.		III.		IV.		V.		Gr.
	/	//	/	//	/	//	/	//	/	//	/	//	
0	14	0	13	12	10	59	7	41	4	5	1	8	30
1	14	0	13	9	10	53	7	34	3	58	1	4	29
2	13	59	13	6	10	47	7	27	3	51	1	0	28
3	13	59	13	3	10	41	7	20	3	44	0	56	27
4	13	59	13	0	10	35	7	13	3	37	0	52	26
5	13	58	12	56	10	29	7	5	3	31	0	48	25
6	13	58	12	52	10	23	6	58	3	24	0	44	24
7	13	57	12	48	10	17	6	51	3	17	0	40	23
8	13	56	12	44	10	11	6	44	3	10	0	37	22
9	13	55	12	40	10	4	6	36	3	3	0	34	21
10	13	54	12	36	9	57	6	28	2	57	0	31	20
11	13	53	12	32	9	51	6	20	2	50	0	28	19
12	13	52	12	28	9	45	6	13	2	44	0	25	18
13	13	51	12	24	9	39	6	6	2	38	0	22	17
14	13	50	12	20	9	32	5	59	2	32	0	19	16
15	13	48	12	15	9	25	5	52	2	26	0	17	15
16	13	46	12	11	9	19	5	44	2	20	0	15	14
17	13	44	12	6	9	13	5	37	2	14	0	13	13
18	13	42	12	1	9	6	5	30	2	8	0	11	12
19	13	40	11	56	8	59	5	23	2	3	0	9	11
20	13	38	11	51	8	52	5	16	1	58	0	7	10
21	13	37	11	46	8	45	5	8	1	52	0	6	9
22	13	35	11	41	8	38	5	1	1	47	0	5	8
23	13	33	11	36	8	31	4	54	1	42	0	4	7
24	13	30	11	31	8	24	4	47	1	37	0	3	6
25	13	27	11	26	8	17	4	40	1	32	0	2	5
26	13	24	11	21	8	10	4	33	1	27	0	2	4
27	13	21	11	16	8	3	4	26	1	22	0	1	3
28	13	18	11	11	7	56	4	19	1	17	0	1	2
29	13	15	11	5	7	49	4	12	1	12	0	0	1
30	13	22	10	59	7	41	4	5	1	8	0	0	0
Sig. XI.		X.		IX.		VIII.		VII.		VI.			

ÆQUATIONUM LUMINIS CORRECTIONES.

Locus Jovis Heliocentri- cus.	Corre- ctiones Adden- dæ.	Locus Jovis Heliocentri- cus.
<u>S</u> <u>o</u>	<u>I</u> <u>II</u>	<u>S</u> <u>o</u>
o 10	o o	o 10
o 20	o 2	o o
I o	o 6	II 20
I 10	o 13	II 10
I 20	o 23	II o
<u>2</u> <u>o</u>	<u>o</u> <u>35</u>	<u>10</u> <u>20</u>
2 10	o 49	10 10
2 20	I 5	10 o
3 o	I 22	9 20
3 10	I 40	9 10
<u>3</u> <u>20</u>	<u>I</u> <u>58</u>	<u>9</u> <u>o</u>
4 o	2 17	8 20
4 10	2 34	8 10
4 20	2 50	8 o
5 o	3 4	7 20
<u>5</u> <u>10</u>	<u>3</u> <u>15</u>	<u>7</u> <u>10</u>
5 20	3 24	7 o
6 o	3 29	6 20
6 10	3 30	6 10

Quoniam Experimento constat serius accidere Satellitum Eclipses, quo major est Jovis distantia a Terrâ, ac proinde Lucem non nisi motu progressivo propagari; itaq; Tabel- lam hanc Correctionis Æ- quationum Luminis adje- cimus, e qua augmenta earum ab Eccentricitate Planetæ or- ta capienda sunt.

*Distantiæ apparentes Satellitum a Centro Jovis in Semidiamentris Jovis
& Semidiamentri Centesimis.*

<i>Satellitum a Loco Jovis Geocentrico Distantiæ.</i>														
Sig. O. Or. VI. Occ.					Sig. I. Or. VII. Occ.					Sig. II. Or. VIII. Occ.				
<i>Distantia Satellitis.</i>					<i>Distantia Satellitis.</i>					<i>Distantia Satellitis.</i>				
Gr.	I.	II.	III.	IV.	I.	II.	III.	IV.		I.	II.	III.	IV.	Gr.
	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>		<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	<i>Semid.</i>	
0	0,0	0,0	0,0	0,0	2,95	4,70	7,50	13,19		5,12	8,14	12,99	22,85	30
1	0,10	0,16	0,26	0,46	3,04	4,84	7,73	13,59		5,17	8,22	13,12	23,07	29
2	0,21	0,33	0,52	0,92	3,13	4,98	7,95	13,98		5,22	8,30	13,24	23,29	28
3	0,31	0,49	0,78	1,38	3,22	5,12	8,17	14,37		5,27	8,38	13,36	23,51	27
4	0,41	0,66	1,05	1,84	3,30	5,26	8,39	14,75		5,31	8,45	13,48	23,71	26
5	0,51	0,82	1,31	2,30	3,39	5,39	8,60	15,13		5,36	8,52	13,59	23,91	25
6	0,62	0,98	1,57	2,76	3,47	5,53	8,82	15,51		5,40	8,59	13,70	24,10	24
7	0,72	1,14	1,83	3,22	3,56	5,66	9,03	15,88		5,44	8,66	13,81	24,28	23
8	0,82	1,31	2,09	3,67	3,64	5,79	9,24	16,24		5,48	8,72	13,91	24,46	22
9	0,92	1,47	2,34	4,13	3,72	5,92	9,44	16,60		5,52	8,78	14,00	24,63	21
10	1,03	1,63	2,60	4,58	3,80	6,04	9,64	16,96		5,55	8,84	14,10	24,79	20
11	1,13	1,79	2,86	5,03	3,87	6,17	9,84	17,31		5,59	8,89	14,18	24,95	19
12	1,23	1,95	3,11	5,48	3,95	6,29	10,04	17,65		5,62	8,94	14,27	25,09	18
13	1,33	2,12	3,37	5,93	4,03	6,41	10,23	17,99		5,65	8,99	14,34	25,23	17
14	1,43	2,27	3,63	6,38	4,10	6,53	10,42	18,32		5,68	9,04	14,42	25,36	16
15	1,53	2,43	3,88	6,83	4,18	6,65	10,61	18,65		5,71	9,08	14,49	25,48	15
16	1,63	2,59	4,13	7,27	4,25	6,76	10,79	18,98		5,73	9,12	14,56	25,60	14
17	1,73	2,75	4,38	7,71	4,32	6,88	10,98	19,30		5,76	9,16	14,62	25,71	13
18	1,83	2,91	4,63	8,15	4,39	6,99	11,15	19,61		5,78	9,20	14,67	25,81	12
19	1,92	3,06	4,88	8,59	4,46	7,09	11,32	19,91		5,80	9,23	14,72	25,90	11
20	2,02	3,22	5,13	9,02	4,53	7,20	11,49	20,21		5,82	9,26	14,77	25,98	10
21	2,12	3,37	5,37	9,45	4,59	7,31	11,66	20,50		5,83	9,29	14,81	26,06	9
22	2,22	3,52	5,62	9,88	4,66	7,41	11,82	20,79		5,85	9,31	14,85	26,13	8
23	2,31	3,67	5,86	10,31	4,72	7,51	11,98	21,07		5,87	9,33	14,89	26,19	7
24	2,40	3,82	6,11	10,73	4,78	7,61	12,14	21,34		5,88	9,35	14,92	26,24	6
25	2,50	3,97	6,34	11,15	4,84	7,70	12,29	21,61		5,89	9,37	14,94	26,28	5
26	2,59	4,12	6,57	11,57	4,90	7,80	12,44	21,87		5,89	9,38	14,96	26,32	4
27	2,68	4,27	6,81	11,98	4,96	7,89	12,58	22,13		5,90	9,39	14,98	26,35	3
28	2,77	4,41	7,04	12,39	5,01	7,97	12,72	22,37		5,91	9,40	14,99	26,37	2
29	2,86	4,56	7,27	12,79	5,07	8,06	12,86	22,61		5,91	9,40	15,00	26,38	1
30	2,95	4,70	7,50	13,19	5,12	8,14	12,99	22,85		5,91	9,40	15,00	26,38	0
Sig. XI. Occ. V. Or.					Sig. X. Occ. IV. Or.					Sig. IX. Occ. III. Or.				

TABULA LATITUDINARIA SATELLITUM JOVIS.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor. 6. Aufst.								Sig. 1. Bor. 7. Aufst.								Sig. 2. Bor. 8. Aufst.								
	Inclinatio.						Re- duct. Subtr.	Inclinatio.						Re- duct. Subtr.	Inclinatio.						Re- duct. Subtr.				
	Satellitum I. II. III.			Satellitidis IV.				Satellitum I. II. III.			Satellitidis IV.				Satellitum I. II. III.			Satellitidis IV.							
Gr.	0	1	11	0	1	11	1	11	0	1	11	0	1	11	1	11	0	1	11	0	1	11	1	11	
0	0	0	0	0	0	0	0	0	1	27	28	1	20	58	1	44	2	31	32	2	20	16	1	44	30
1	0	3	3	0	2	50	0	4	1	30	6	1	23	24	1	46	2	33	2	2	21	40	1	42	29
2	0	6	6	0	5	39	0	8	1	32	42	1	25	49	1	48	2	34	30	2	23	1	1	40	28
3	0	9	9	0	8	28	0	13	1	35	17	1	28	12	1	50	2	35	54	2	24	20	1	38	27
4	0	12	12	0	11	18	0	17	1	37	50	1	30	34	1	51	2	37	16	2	25	36	1	35	26
5	0	15	14	0	14	7	0	21	1	40	21	1	32	54	1	53	2	38	35	2	26	49	1	32	25
6	0	18	17	0	16	56	0	25	1	42	50	1	35	12	1	54	2	39	51	2	27	59	1	29	24
7	0	21	19	0	19	44	0	29	1	45	17	1	37	28	1	56	2	41	4	2	29	7	1	26	23
8	0	24	21	0	22	32	0	33	1	47	42	1	39	43	1	57	2	42	15	2	30	12	1	23	22
9	0	27	22	0	25	20	0	37	1	50	6	1	41	55	1	58	2	43	22	2	31	14	1	20	21
10	0	30	22	0	28	7	0	41	1	52	28	1	44	6	1	59	2	44	26	2	32	13	1	17	20
11	0	33	23	0	30	54	0	45	1	54	47	1	46	16	1	59	2	45	27	2	33	10	1	14	19
12	0	36	22	0	33	40	0	49	1	57	4	1	48	23	2	0	2	46	25	2	34	4	1	11	18
13	0	39	21	0	36	26	0	53	1	59	19	1	50	28	2	0	2	47	20	2	34	55	1	8	17
14	0	42	19	0	39	11	0	56	2	1	32	1	52	31	2	0	2	48	13	2	35	43	1	4	16
15	0	45	16	0	41	55	1	0	2	3	43	1	54	32	2	0	2	49	2	2	36	28	1	0	15
16	0	48	13	0	44	38	1	4	2	5	51	1	56	31	2	0	2	49	47	2	37	10	0	56	14
17	0	51	9	0	47	21	1	8	2	7	57	1	58	27	2	0	2	50	30	2	37	50	0	53	13
18	0	54	3	0	50	3	1	11	2	10	1	2	0	22	2	0	2	51	10	2	38	27	0	49	12
19	0	56	57	0	52	44	1	14	2	12	3	2	2	15	1	59	2	51	47	2	39	1	0	45	11
20	0	59	50	0	55	23	1	17	2	14	2	2	4	5	1	59	2	52	20	2	39	32	0	41	10
21	1	2	41	0	58	2	1	20	2	15	58	2	5	53	1	58	2	52	50	2	40	0	0	37	9
22	1	5	32	1	0	40	1	23	2	17	52	2	7	38	1	57	2	53	17	2	40	25	0	33	8
23	1	8	21	1	3	17	1	26	2	19	44	2	9	21	1	56	2	53	41	2	40	47	0	29	7
24	1	11	9	1	5	52	1	29	2	21	33	2	11	2	1	54	2	54	2	2	41	6	0	25	6
25	1	13	56	1	8	27	1	32	2	23	20	2	12	41	1	53	2	54	20	2	41	23	0	21	5
26	1	16	41	1	11	0	1	35	2	25	4	2	14	17	1	51	2	54	34	2	41	36	0	17	4
27	1	19	25	1	13	31	1	38	2	26	45	2	15	51	1	50	2	54	45	2	41	46	0	13	3
28	1	22	8	1	16	2	1	40	2	28	23	2	17	22	1	48	2	54	54	2	41	54	0	8	2
29	1	24	49	1	18	31	1	42	2	29	59	2	18	50	1	46	2	54	58	2	41	58	0	4	1
30	1	27	28	1	20	58	1	44	2	31	32	2	20	16	1	44	2	55	0	2	42	0	0	0	0
Sig. 11. Aufst. 5. Bor. Adde.								Sig. 10. Aufst. 4. Bor. Adde.								Sig. 9. Aufst. 3. Bor. Adde. Gr.									

*Viri Reverendi D. Jacobi Bradley, in has suas
Satellitum Tabulas Notæ.*

IN his Tabulis medios *Satellitum* motus limitavimus, factâ collatione plurimorum Observationum, quæ haberi poterant antiquiorum, quæq; præ cæteris accuratæ visæ sunt, cum nuperis nostris apud *Wansted* captis; *Jove* nempe post quatuor Revolutiones in eodem fere Orbis sui loco existente. Conferendo autem pari modo observata, post unam, duas vel tres *Jovis* periodos, invenimus aliquando differentias sat notabiles in motibus *Satellitum* trium Interiorum, maxime vero in *Secundo* sive *Penintimo*.

Utrum hæ inæqualitates aliqua ex parte oriantur ab *Eccentricitate* Orbium *Satellitum* ac motu *Apsidum*, nondum satis constat; verum juxta ea quæ in motu *Secundi* annotavimus, probabile est eas mutuis *Satellitum* in se invicem actionibus tribui posse. *Secundus* enim interdum tam brevi temporis spatio tantum ab æquabili motu deviat, ut a parvâ *Eccentricitate* effici non possit, dum observationes aliæ eam non patiuntur magnam. Quantum hætenus colligere datum est, periodus horum errorum proxime respondet tempori, quo tres *Satellites* Interiores ad eundem situm inter se & cum Axe Umbrae *Jovis* revolvuntur, id quod fit singulis 437 Diebus, post 123 *Secundi* periodos. Elapso hoc spatio iidem proxime errores eodem fere ordine reperiuntur ac prius: Intermedio autem tempore, sc. post 60 ejus periodos, deviat *Secundus* 10', 20', 30', imo interdum 40 temporis minuta, a tenore motus ante vel post septem menses servato. Quoniam vero *Satellites* post dictam periodum, eundem in Cælo situm non obtinent, fieri potest ut hi errores paulo diversi proveniant. Quod si adhuc *Eccentricus* fuerit hujus *Satellitis* Orbis, ut nuperæ suadent observationes, compositæ utriusq; inæqualitatis causæ motum ejus valde intricatum reddent, nec facile una ab alterâ Observatione solâ distinguetur.

Errores *Primi* ac *Tertii* non sunt adeo magni, sed ab iisdem causis, ut videtur, orti; utpote qui ab *Eccentricitate* solâ minime pendent. Sensibilem etiam notavimus differentiam inter Durationes Eclipsium *Primi* apud diversos *Nodos* factarum, easq; alternatim majores & minores esse: Majores scilicet in *Leone* ad *Nodum* Descendentem, ac Annis 168 $\frac{2}{3}$, 169 $\frac{4}{5}$ ac 1718, saltem 2^h. 20' durantes; quæ tamen ad *Nodum* alterum in *Aquario*, Annis 1677 & 1689, 2^h. 14' non excedebant; uti conferendo plures Observationes Immersionum & Emerfusionum, quantum fieri potuit inter se propin quarum, liquido constabat. Manifestum autem est hanc discrepantiam ab *Eccentrici-*

tate

tate Orbis *Satellitæ*, si qua sit, non totam oriri. Cui vero causæ tribuenda sit nondum perspicimus. Dum autem futuris invigilamus Observationibus, quarum ope res à posteriori aperiri poterit, liceat sperare aliquos e Geometris magni *Newtoni* æmulis, stabili & probato *Gravitatis Principio* innixos, investigandis à priori mutuis his *Satellitum* effectibus, eximiam operam collocaturos.

Ex iis quas habemus *Quarti* Observationes, constat Orbem ejus *Ellipticum* esse: Et omnia nostra nupera observata probe repræsentantur, ponendo maximam ejus *Æquationem* æqualem illi Planetæ *Veneris*, sive 48 Min. summamq; ejus *Apsidem* occupasse $\times 8^{\circ}. 00'$, ineunte Anno 1717. Conferendo autem hanc Hypothesin cum Observationibus prioribus, Annis 1671, 1676, & 1677 factis, calculus multum a Cælo discrepare inventus est. Reductâ vero *Apside* in $\approx 14^{\circ}. 00'$, ineunte Anno 1677, sublata est fere omnis ista discrepantia. Posito itaq; *Apsidem*, motu æquabili sex graduum in decennio, in consequentia ferri, cum intermediis etiam Observationibus Hypothesis illa probe congruere deprehensa est, quamq; proinde in Tabulis amplexi sumus. Hunc autem computum ubiq; Cælo conformem (si duo tantum observata excipias, eaq; merito suspecta) intra sextam gradus partem experimur.

Tabula nostra *Æquationum Luminis* supponit radios Lucis motu æquabili per Diametrum Orbis *Terræ* in 14 Temporis Minutis propagari, & omnino varianti *Jovis* a *Terrâ* distantia respondet, cum *Jupiter Soli* proximus est. Cum autem in *Aphelio* ejus augetur distantia Planetæ quartâ parte diametri Orbis *Terræ*, necesse habuimus has *Æquationes* adjectâ Tabellâ corrigere.

Quod Latitudines attinet, e nuperis Observationibus constat Nodos *Quarti* ad grad. 11² *Aquarii* & *Leonis* hodie reperiri; Nodosq; *Tertii* his proximos esse: Quocirca etiam eos *Satellitum* Interiorum ibidem collocamus, id non prohibentibus hætenus a nobis Observatis. Quod si Nodi *Satellitum* ante 40 Annos, grad. 15^{um} *Aquarii* & *Leonis* occupabant, ut vult D. *Cassini*, cujus autoritate non alia gravior est, tum in qualibet *Jovis* periodo duodécennali unum circiter gradum retrocessisse videntur. Inclinationem ad Planum Orbis *Jovis* à D. *Cassino* positam, i. e. $2^{\circ}. 55'$, retinemus in cæteris; *Quarti* vero Orbitam paulo minus inclinari, nempe $2^{\circ}. 42'$, statuimus. Verum circellorum adeo minimorum situm accurate definire plane arduum est, neque absq; *Telescopiis* perfectissimis suscipiendum.

Coronidis loco placuit Reverendo D. Pound Tabulas sequentes prioribus æquipollentes de proprio subjungere, pro Calculo Eclipsium Primæ *Satellitæ* solâ Additione absolvendo, ad exemplum Tabularum elaboratissimarum D. *Cassini* factas, sed & compendio adhuc multo majori expeditas.

EPOCHÆ CONJUNCTIONUM PRIMI
SATELLITIS CUM JOVE.

Annis Julianis Cur- rent.	Conjunct.				Num. A.	Num. B.		Annis Julianis Cur- rent.	Conjunct.				Num. A.	Num. B.
	D.	H.	/	//					D.	H.	/	//		
1719	I	6	II	13	872	395		1749	O	II	9	34	400	865
1720	O	20	22	40	956	309		1750	O	I	21	I	485	779
21	I	5	2	44	40	228		51	I	10	I	5	569	697
22	O	19	14	II	125	142		52	I	O	12	33	653	611
23	O	9	25	38	209	56		53	I	8	52	37	738	530
1724	I	18	5	42	293	970		1754	O	23	4	4	822	444
1725	O	8	17	10	377	888		1755	O	13	15	32	906	358
26	I	16	57	13	462	807		56	O	3	27	O	990	272
27	I	7	8	41	546	721		57	O	12	7	3	75	190
28	O	21	20	8	630	635		58	O	2	18	30	159	109
1729	I	6	O	12	715	553		1759	I	10	58	34	243	23
1730	O	20	II	39	799	467		1760	I	I	10	I	328	937
31	O	10	23	7	883	381		61	I	9	50	5	412	855
32	O	O	34	34	967	295		62	I	O	I	32	496	769
33	O	9	14	38	52	214		63	O	14	13	O	580	683
1734	I	17	54	41	136	132		1764	O	4	24	27	665	597
1735	I	8	6	9	220	46		1765	O	13	4	31	749	516
36	O	22	17	36	305	960		66	O	3	15	58	833	430
37	I	6	57	40	389	879		67	I	11	56	2	918	348
38	O	21	9	7	473	793		68	I	2	7	29	2	262
1739	O	11	20	35	557	707		1769	I	10	47	33	86	181
1740	O	I	32	2	642	621		1770	I	O	59	O	171	95
41	O	10	12	6	726	539		71	O	15	10	28	255	9
42	O	O	23	33	810	453		72	O	5	21	56	339	923
43	I	9	3	37	895	372		73	O	14	2	O	423	841
1744	O	23	15	4	979	286		1774	O	4	13	27	508	760
1745	I	7	55	8	63	204		1775	I	12	53	31	592	674
46	O	22	6	35	148	118		76	I	3	4	58	676	588
47	O	12	18	3	232	32		77	I	11	45	I	761	506
48	O	2	29	30	316	946		78	I	I	56	28	845	420
1749	O	11	9	34	400	865		1779	O	16	7	56	929	334

H h h h

REVOLUTIONES PRIMI SATELLITIS JOVIS IN MENSIBUS.

JANUARI I.						MARTII.						MAII.					
D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.
1	18	28	36	0	5	1	4	12	23	14	155	0	8	24	45	28	304
3	12	57	12	1	9	2	22	40	59	14	159	2	2	53	21	28	309
5	7	25	48	1	14	4	17	9	35	15	164	3	21	21	57	29	313
7	1	54	24	2	18	6	11	38	10	15	168	5	15	50	33	29	317
8	20	23	0	2	23	8	6	6	46	16	173	7	10	19	9	29	322
10	14	51	36	2	27	10	0	35	22	16	177	9	4	47	45	30	326
12	9	20	12	3	32	11	19	3	58	16	182	10	23	16	21	30	330
14	3	48	48	3	37	13	13	32	34	17	186	12	17	44	57	31	335
15	22	17	24	4	41	15	8	1	10	17	190	14	12	13	33	31	339
17	16	46	0	4	46	17	2	29	46	18	195	16	6	42	9	31	343
19	11	14	36	4	51	18	20	58	22	18	199	18	1	10	45	32	348
21	5	43	12	5	55	20	15	26	58	18	204	19	19	39	21	32	352
23	0	11	47	5	60	22	9	55	34	19	208	21	14	7	57	33	356
24	18	40	23	6	64	24	4	24	10	19	213	23	8	36	33	33	361
26	13	8	59	6	69	25	22	52	46	20	217	25	3	5	9	33	365
28	7	37	35	7	73	27	17	21	22	20	221	26	21	33	45	34	369
30	2	6	11	7	78	29	11	49	58	20	225	28	16	2	21	34	373
31	20	34	47	7	82	31	6	18	34	21	230	30	10	30	57	35	378
FEBRUARI I.						APRILIS.						JUNII.					
D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.
2	15	3	23	8	87	2	0	47	10	21	235	1	4	59	32	35	382
4	9	31	59	8	92	3	19	15	46	22	239	2	23	28	8	36	386
6	4	0	35	9	96	5	13	44	22	22	244	4	17	56	44	36	391
7	22	29	11	9	101	7	8	12	58	22	248	6	12	25	20	36	395
9	16	57	47	9	105	9	2	41	34	23	252	8	6	53	56	37	399
11	11	26	23	10	110	10	21	10	10	23	257	10	1	22	32	37	403
13	5	54	59	10	114	12	15	38	46	24	261	11	19	51	8	38	408
15	0	23	35	11	118	14	10	7	22	24	265	13	14	19	44	38	412
16	18	52	11	11	123	16	4	35	58	25	270	15	8	48	20	38	416
18	13	20	47	11	128	17	23	4	33	25	274	17	3	16	56	39	420
20	7	49	23	12	132	19	17	33	9	25	279	18	21	45	32	39	425
22	2	17	59	12	137	21	12	1	45	26	283	20	16	14	8	40	429
23	20	46	35	13	141	23	6	30	21	26	287	22	10	42	44	40	433
25	15	15	11	13	146	25	0	58	57	27	292	24	5	11	20	40	438
27	9	43	47	13	150	26	19	27	33	27	296	25	23	39	56	41	442
						28	13	56	9	27	300	27	18	8	32	41	446
						30	8	24	45	28	304	29	12	37	8	42	450

REVOLUTIONES PRIMI SATELLITIS JOVIS IN MENSIBUS.

JULII						SEPTEMBRIS.						NOVEMBRIS.					
D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.	D.	H.	'	"	A.	B.
1	7	5	44	42	455	1	5	46	42	56	606	0	9	59	5	70	758
3	1	34	20	42	459	3	0	15	18	57	610	2	4	27	41	71	762
4	20	2	56	43	463	4	18	43	54	57	615	3	22	56	17	71	767
6	14	31	32	43	468	6	13	12	30	58	619	5	17	24	53	71	772
8	9	0	8	44	472	8	7	41	6	58	624	7	11	53	29	72	776
10	3	28	44	44	476	10	2	9	42	58	628	9	6	22	5	72	781
11	21	57	20	45	480	11	20	38	18	59	632	11	0	50	41	73	785
13	16	25	55	45	485	13	15	6	54	59	637	12	19	19	17	73	790
15	10	54	31	45	489	15	9	35	30	60	641	14	13	47	53	74	794
17	5	23	7	46	493	17	4	4	6	60	646	16	8	16	29	74	799
18	23	51	43	46	498	18	22	32	42	60	650	18	2	45	5	74	804
20	18	20	19	47	502	20	17	1	18	61	655	19	21	13	40	75	808
22	12	48	55	47	506	22	11	29	54	61	659	21	15	42	16	75	813
24	7	17	31	47	510	24	5	58	30	62	663	23	10	10	52	76	817
26	1	46	7	48	515	26	0	27	6	62	668	25	4	39	28	76	822
27	20	14	43	48	519	27	18	55	42	62	672	26	23	8	4	76	827
29	14	43	19	49	523	29	13	24	18	63	677	28	17	36	40	77	831
31	9	11	55	49	528							30	12	5	16	77	836
AUGUSTI.						OCTOBRIS.						DECEMBRIS.					
2	3	40	31	49	532	1	7	52	54	63	681	2	6	33	52	78	840
3	22	9	7	50	536	3	2	21	30	64	686	4	1	2	28	78	845
5	16	37	43	50	541	4	20	50	6	64	690	5	19	31	4	78	849
7	11	6	19	51	545	6	15	18	41	65	695	7	13	59	40	79	854
9	5	34	55	51	549	8	9	47	17	65	699	9	8	28	16	79	859
11	0	3	31	51	554	10	4	15	53	65	704	11	2	56	52	80	863
12	18	32	7	52	558	11	22	44	29	66	708	12	21	25	28	80	868
14	13	0	43	52	562	13	17	13	5	66	713	14	15	54	4	80	873
16	7	29	19	53	567	15	11	41	41	67	717	16	10	22	40	81	877
18	1	57	55	53	571	17	6	10	17	67	721	18	4	51	16	81	882
19	20	26	31	54	575	19	0	38	53	67	726	19	23	19	52	82	886
21	14	55	7	54	580	20	19	7	29	68	730	21	17	48	28	82	891
23	9	23	43	54	584	22	13	36	5	68	735	23	12	17	4	82	896
25	3	52	18	55	588	24	8	4	41	69	739	25	6	45	40	83	900
26	22	20	54	55	593	26	2	33	17	69	744	27	1	14	16	83	905
28	16	49	30	56	597	27	21	1	53	69	749	28	19	42	52	84	909
30	11	18	6	56	602	29	15	30	29	70	753	30	14	11	28	84	914

PRIMÆ EQUATIONES CONJUNCTIONUM
PRIMI SATELLITIS CUM JOVE.

Num. A.	Equat. Conjunct. Adde.	Eq. Num. B.	Num. A.	Equat. Conjunct. Adde.	Eq. Num. B.	Num. A.	Equat. Conjunct. Adde.	Eq. Num. B.	Num. A.	Equat. Conjunct. Adde.	Eq. Num. B.
0	39 8	15	128	12 7	26	256	0 1	31	384	11 52	26
4	38 12	16	132	11 27	26	260	0 0	31	388	12 37	26
8	37 16	16	136	10 47	26	264	0 1	31	392	13 23	25
12	36 21	16	140	10 9	27	268	0 3	31	396	14 11	25
16	35 26	17	144	9 31	27	272	0 7	31	400	14 59	25
20	34 30	17	148	8 45	27	276	0 12	31	404	15 48	24
24	33 35	17	152	8 19	27	280	0 19	31	408	16 38	24
28	32 40	18	156	7 44	28	284	0 28	30	412	17 30	24
32	31 45	18	160	7 10	28	288	0 38	30	416	18 22	23
36	30 50	19	164	6 38	28	292	0 50	30	420	19 15	23
40	29 56	19	168	6 7	28	296	1 3	30	424	20 9	23
44	29 3	19	172	5 37	28	300	1 17	30	428	21 4	22
48	28 10	20	176	5 8	29	304	1 33	30	432	21 59	22
52	27 16	20	180	4 41	29	308	1 50	30	436	22 55	22
56	26 23	20	184	4 15	29	312	2 8	30	440	23 53	21
60	25 30	21	188	3 49	29	316	2 28	30	444	24 51	21
64	24 38	21	192	3 24	29	320	2 51	30	448	25 49	21
68	23 47	21	196	3 1	29	324	3 15	29	452	26 48	20
72	22 56	22	200	2 40	30	328	3 40	29	456	27 48	20
76	22 5	22	204	2 20	30	332	4 6	29	460	28 48	19
80	21 15	22	208	2 1	30	336	4 34	29	464	29 49	19
84	20 26	23	212	1 42	30	340	5 3	29	468	30 50	19
88	19 37	23	216	1 25	30	344	5 34	29	472	31 51	18
92	18 48	23	220	1 10	30	348	6 5	28	476	32 53	18
96	18 0	24	224	0 58	30	352	6 38	28	480	33 55	17
100	17 14	24	228	0 47	30	356	7 13	28	484	34 57	17
104	16 28	24	232	0 36	30	360	7 50	28	488	35 59	17
108	15 42	24	236	0 26	30	364	8 27	27	492	37 1	16
112	14 57	25	240	0 18	30	368	9 6	27	496	38 5	16
116	14 13	25	244	0 12	31	372	9 46	27	500	39 8	15
120	13 30	25	248	0 7	31	376	10 27	27	504	40 11	15
124	12 48	26	252	0 4	31	380	11 9	26	508	41 15	14
128	12 7	26	256	0 1	31	384	11 52	26	512	42 17	14

PRIMÆ EQUATIONES CONJUNCTIONUM
PRIMI SATELLITIS CUM JOVE.

Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.	Num. A.	Æquat. Conjunct. Adde.	Æq. Num. B.
	"			"			"			"	
512	42 17	14	640	70 26	3	768	77 40	0	896	61 48	6
516	43 19	14	644	71 3	3	772	77 29	0	900	61 2	7
520	44 21	13	648	71 38	3	776	77 18	0	904	60 15	7
524	45 23	13	652	72 11	2	780	77 6	0	908	59 28	7
528	46 25	13	656	72 42	2	784	76 51	1	912	58 39	8
532	47 26	12	660	73 13	2	788	76 34	1	916	57 50	8
536	48 27	12	664	73 42	2	792	76 15	1	920	57 1	8
540	49 28	11	668	74 10	2	796	75 56	1	924	56 11	9
544	50 28	11	672	74 36	1	800	75 36	1	928	55 20	9
548	51 28	11	676	75 1	1	804	75 15	1	932	54 29	9
552	52 27	10	680	75 25	1	808	74 52	1	936	53 38	10
556	53 25	10	684	75 48	1	812	74 27	1	940	52 46	10
560	54 23	9	688	76 8	1	816	74 1	2	944	51 53	10
564	55 21	9	692	76 26	1	820	73 35	2	948	51 0	11
568	56 17	9	696	76 43	0	824	73 8	2	952	50 6	11
572	57 12	8	700	76 59	0	828	72 39	2	956	49 13	11
576	58 7	8	704	77 13	0	832	72 9	2	960	48 20	12
580	59 1	8	708	77 26	0	836	71 38	3	964	47 26	12
584	59 54	7	712	77 38	0	840	71 6	3	968	46 31	12
588	60 46	7	716	77 48	0	844	70 32	3	972	45 36	13
592	61 38	6	720	77 57	0	848	69 57	3	976	44 41	13
596	62 28	6	724	78 4	0	852	69 21	3	980	43 46	13
600	63 17	6	728	78 9	0	856	68 45	4	984	42 50	14
604	64 5	5	732	78 13	0	860	68 7	4	988	41 55	14
608	64 53	5	736	78 15	0	864	67 29	4	992	41 0	14
612	65 39	5	740	78 16	0	868	66 49	4	996	40 4	15
616	66 24	5	744	78 15	0	872	66 9	5	1000	39 8	15
620	67 7	4	748	78 12	0	876	65 28	5	1004	38 12	16
624	67 49	4	752	78 9	0	880	64 46	5	1008	37 16	16
628	68 30	4	756	78 4	0	884	64 3	5	1012	36 21	16
632	69 10	4	760	77 58	0	888	63 19	6	1016	35 26	17
636	69 49	3	764	77 50	0	892	62 34	6	1020	34 30	17
640	70 26	3	768	77 40	0	896	61 48	6	1024	33 35	17

SECUNDÆ ÆQUATIONES CONJUNCTIONUM
PRIMI SATELLITIS CUM JOVE.

Num. B Æqu.	0	100	200	300	400	500	600	700	800	900
	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.	Æquat.
	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //	/ //
0	14 0	12 52	9 45	5 30	1 37	0 0	1 37	5 30	9 45	12 52
4	14 0	12 46	9 36	5 20	1 30	0 0	1 44	5 40	9 54	12 58
8	13 59	12 40	9 26	5 9	1 23	0 1	1 52	5 51	10 3	13 2
12	13 59	12 35	9 17	4 59	1 16	0 2	1 59	6 1	10 12	13 7
16	13 58	12 29	9 7	4 48	1 9	0 3	2 7	6 11	10 21	13 11
20	13 57	12 23	8 58	4 38	1 3	0 4	2 15	6 22	10 31	13 16
24	13 56	12 17	8 48	4 28	0 57	0 5	2 24	6 33	10 40	13 20
28	13 54	12 11	8 38	4 18	0 52	0 7	2 32	6 44	10 49	13 25
32	13 53	12 4	8 28	4 8	0 46	0 10	2 41	6 55	10 57	13 29
36	13 51	11 56	8 17	3 58	0 40	0 13	2 50	7 5	11 5	13 33
40	13 49	11 49	8 7	3 48	0 35	0 16	2 59	7 16	11 13	13 36
44	13 47	11 42	7 57	3 38	0 31	0 19	3 9	7 26	11 20	13 38
48	13 44	11 34	7 47	3 29	0 27	0 23	3 19	7 36	11 27	13 41
52	13 41	11 27	7 36	3 19	0 23	0 27	3 29	7 47	11 34	13 44
56	13 38	11 20	7 26	3 9	0 19	0 31	3 38	7 57	11 42	13 47
60	13 36	11 13	7 16	2 59	0 16	0 35	3 48	8 7	11 49	13 49
64	13 33	11 5	7 5	2 50	0 13	0 40	3 58	8 17	11 56	13 51
68	13 29	10 57	6 55	2 41	0 10	0 46	4 8	8 28	12 4	13 53
72	13 25	10 49	6 44	2 32	0 7	0 52	4 18	8 38	12 11	13 54
76	13 20	10 40	6 33	2 24	0 5	0 57	4 28	8 48	12 17	13 56
80	13 16	10 31	6 22	2 15	0 4	1 3	4 38	8 58	12 23	13 57
84	13 11	10 21	6 11	2 7	0 3	1 9	4 48	9 7	12 29	13 58
88	13 7	10 12	6 1	1 59	0 2	1 16	4 59	9 17	12 35	13 59
92	13 2	10 3	5 51	1 52	0 1	1 23	5 9	9 26	12 40	13 59
96	12 58	9 54	5 40	1 44	0 0	1 30	5 20	9 36	12 46	14 0
100	12 52	9 45	5 30	1 37	0 0	1 37	5 30	9 45	12 52	14 0

101	12 46	9 36	5 20	1 30	0 0	1 44	5 40	9 54	12 58	14 0
102	12 40	9 26	5 9	1 23	0 1	1 52	5 51	10 3	13 2	14 0
103	12 35	9 17	4 59	1 16	0 2	1 59	6 1	10 12	13 7	14 0
104	12 29	9 7	4 48	1 9	0 3	2 7	6 11	10 21	13 11	14 0
105	12 23	8 58	4 38	1 3	0 4	2 15	6 22	10 31	13 16	14 0

TERTIÆ
ÆQUATIONES
ADDENDÆ.

SEMIDURATIONES ECLIPSIVM
PRIMI SATELLITIS JOVIS.

Num. A.	Æqua- tiones.	Num. A.	Num. A.	Semidu- rationes.	Num. A.	Semidu- rationes.	Num. A.	Semidu- rationes.	Num. A.	Semidu- rationes.
	' "			H. / "		H. / "		H. / "		H. / "
0	3 30	1000	0	1 5 9	250	1 7 0	500	1 5 9	750	1 7 46
20	3 29	980	10	1 4 56	260	1 7 15	510	1 4 53	760	1 7 57
40	3 28	960	20	1 4 44	270	1 7 31	520	1 4 39	770	1 8 7
60	3 25	940	30	1 4 33	280	1 7 45	530	1 4 26	780	1 8 15
80	3 19	920	40	1 4 23	290	1 7 57	540	1 4 15	790	1 8 22
100	3 12	900	50	1 4 14	300	1 8 7	550	1 4 7	800	1 8 26
120	3 4	880	60	1 4 7	310	1 8 15	560	1 4 3	810	1 8 28
140	2 56	860	70	1 4 4	320	1 8 22	570	1 4 1	820	1 8 30
160	2 46	840	80	1 4 2	330	1 8 27	580	1 4 0	830	1 8 28
180	2 34	820	90	1 4 0	340	1 8 28	590	1 4 3	840	1 8 26
200	2 22	800	100	1 4 2	350	1 8 29	600	1 4 7	850	1 8 22
220	2 10	780	110	1 4 3	360	1 8 27	610	1 4 13	860	1 8 16
240	1 57	760	120	1 4 6	370	1 8 24	620	1 4 23	870	1 8 8
260	1 44	740	130	1 4 12	380	1 8 17	630	1 4 35	880	1 8 0
280	1 30	720	140	1 4 21	390	1 8 9	640	1 4 49	890	1 7 50
300	1 17	700	150	1 4 31	400	1 7 58	650	1 5 4	900	1 7 37
320	1 5	680	160	1 4 42	410	1 7 46	660	1 5 19	910	1 7 22
340	0 53	660	170	1 4 55	420	1 7 31	670	1 5 36	920	1 7 8
360	0 41	640	180	1 5 9	430	1 7 14	680	1 5 54	930	1 6 55
380	0 31	620	190	1 5 23	440	1 6 58	690	1 6 10	940	1 6 40
400	0 22	600	200	1 5 39	450	1 6 40	700	1 6 28	950	1 6 23
420	0 14	580	210	1 5 55	460	1 6 20	710	1 6 46	960	1 6 8
440	0 8	560	220	1 6 11	470	1 6 2	720	1 7 2	970	1 5 54
460	0 4	540	230	1 6 26	480	1 5 45	730	1 7 17	980	1 5 37
480	0 2	520	240	1 6 43	490	1 5 26	740	1 7 33	990	1 5 22
500	0 0	500	250	1 7 0	500	1 5 9	750	1 7 46	1000	1 5 9

In Anno autem Bissexti post Februarium antequam esset unus Dies 6 tem-
poribus Conjunctionum hoc Calculo inventis

De harum Tabularum Constructione.

HÆ Tabulæ e præcedentibus confectæ, ac facilitate Calculi nullis cautionibus obnoxii plurimum se commendantes, in usus *Geographicos* Longitudinibus locorum inveniendis destinatæ sunt: Earum enim ope, absque aliarum Tabularum subsidio, Eclipses *Primi Satellitis Jovis* solâ Additione statim obtinentur, ne mora tædiumve Computi operosioris minus exercitatos ab his studiis deterreret.

Quales autem sint hi Numeri ut melius capiat Lector, sciat *Epochas Conjunctionum* esse momenta Conjunctionis Satellitis cum loco *Jovis* medio, ab ineunte *Januario* Currentis Anni *Juliani* primæ, demptis $39'. 8''$ temporis, quibus Satelles ille *Æquationem Jovis* maximam, sive $5^\circ. 31'. 36''$ peragit. *Num. A* ubiq; est ipsa Anomalia media *Jovis*, Circulo in partes millesimas, quarum singulæ æquipollent $21'. 36''$, dividi supposito. *Num. B* autem angulus est quo, tempore Epochæ, medius *Jovis* locus distat a *Solis* vero, itidem in circuli millesimis æstimatus, sed demptis $15 \frac{1}{3}$ partibus, qualium est æquatio *Jovis* maxima.

Sublatis igitur ex Epochis æquationibus maximis, cæteræ omnes ubiq; fiunt Addendæ: Et quidem *Æquatio Conjunctionum* est summa vel differentia ipsorum $39'. 8''$ ac Temporis quo æquatio *Jovis*, ad datam Anomaliæ mediam *A*, motu Satellitis a *Jove* percurritur; unde nulla fit ad *Num. A* 260, quæ vero ad *Num. A* 740 dupla fit maximæ, sive $1^H. 18'. 16''$. Pari modo *Æquat. Num. B* est summa vel Differentia partium $15 \frac{1}{3}$ & ejusdem æquationis *Jovis* in circuli millesimis, sub contrario Titulo applicatæ, ac proinde dupla fit, sive 31, ad *Num. A* 260, nulla vero ab 740. In Mensibus autem inæqualia facta sunt *Num. B* augmenta, pro ratione inæqualitatis motus Solaris per totum Annum: Quapropter si *Num. B* collecto adjiciatur ejus æquatio, fiet summa (sive Numerus *B æquatus*) angulus Commutationis dictus, i. e. Distantia *Solis* a Loco *Jovis* Heliocentrico, quocum sumenda est *Æquatio Secunda*, quæ eadem cum *Æquatione Luminis*. *Æquatio* autem *Tertia* non alia est quam *Correctio Æquationis Luminis* cum *Num. A* capienda, pariterq; semper addenda.

Hoc autem artificio non solum *Æquationes* omnes fiunt Additivæ, sed cum ordine decimali procedat uterq; Numerus *A* & *B*, multo tutius ac facilius colliguntur.

In Anno autem *Bissextili* post *Februarium* auferendus est unus Dies è temporibus Conjunctionum hoc Calculo inventis.

EPOCHÆ

EPOCHÆ MEDIORUM MOTUUM QVINQUE
SATELLITUM SATURNI.

<i>Annis Julianis ineun- tibus.</i>	<i>Primus ab Æquinoct.</i>	<i>Secundus ab Æquinoct.</i>	<i>Tertius ab Æquinoct.</i>	<i>Quartus ab Æquinoct.</i>	<i>Quintus ab Æquinoct.</i>
	<i>s o /</i>	<i>s o /</i>	<i>s o /</i>	<i>s o /</i>	<i>s o /</i>
1661	3 3 2	10 12 31	4 22 38	11 13 33	11 7 46
81	9 28 16	11 3 40	5 10 7	0 28 49	0 9 37
1701	4 23 31	11 24 48	5 27 35	2 14 4	1 11 28
14	5 25 15	9 11 40	6 7 2	11 19 50	11 19 2
15	9 29 50	1 21 50	3 23 59	10 10 28	6 25 29
1716	2 4 25	6 2 1	1 10 56	9 1 5	2 1 57
17	0 19 42	2 23 43	1 17 34	8 14 16	9 12 56
18	4 24 17	7 3 54	11 4 31	7 4 54	4 19 24
19	8 28 53	11 14 4	8 21 28	5 25 31	11 25 51
1720	1 3 28	3 24 15	6 8 26	4 16 8	7 2 19
1721	11 18 45	0 15 57	6 15 4	3 29 19	2 13 19
22	3 23 20	4 26 8	4 2 1	2 19 57	9 19 46
23	7 27 55	9 6 18	1 18 58	1 10 34	4 26 14
24	0 2 31	1 16 28	11 5 55	0 1 11	0 2 41
1725	10 17 48	10 8 11	11 12 34	11 14 23	7 13 41
1726	2 22 23	2 18 21	8 29 31	10 5 0	2 20 8
27	6 26 58	6 28 32	6 16 28	8 25 37	9 26 36
28	11 1 34	11 8 42	4 3 25	7 16 14	5 3 3
29	9 16 51	8 0 25	4 10 4	6 29 26	0 14 3
1730	1 21 26	0 10 35	1 27 1	5 20 3	7 20 30
1731	5 26 1	4 20 45	11 13 58	4 10 40	2 26 58
32	10 0 36	9 0 56	9 0 55	3 1 17	10 3 25
33	8 15 54	5 22 38	9 7 33	2 14 29	5 14 25
34	0 20 29	10 2 49	6 24 30	1 5 6	0 20 53
1735	4 25 4	2 12 59	4 11 27	11 25 43	7 27 20
1736	8 29 39	6 23 10	1 28 25	10 16 20	3 3 48
37	7 14 56	3 14 52	2 5 3	9 29 32	10 14 47
38	11 19 32	7 25 3	11 22 0	8 20 9	5 21 15
39	3 24 7	0 5 13	9 8 57	7 10 46	0 27 42
1740	7 28 42	4 15 23	6 25 54	6 1 23	8 4 10
1741	6 13 59	1 7 6	7 2 33	5 14 35	3 15 10
42	10 18 34	5 17 16	4 19 30	4 5 12	10 21 37
43	2 23 10	9 27 27	2 6 27	2 25 49	5 28 5
44	6 27 45	2 7 37	11 23 24	1 16 26	1 4 32
1745	5 13 2	10 29 20	0 0 3	0 29 38	8 15 32

MEDII MOTUS SATELLITUM SATURNI IN ANNIS.

<i>Annis</i>	<i>Primi</i>			<i>Secundi</i>			<i>Tertii</i>			<i>Quarti</i>			<i>Quinti</i>		
0	s	o	l	s	o	l	s	o	l	s	o	l	s	o	l
1	4	4	35	4	10	10	9	16	57	10	20	37	7	6	27
2	8	9	10	8	20	21	7	3	54	9	11	14	2	12	55
3	0	13	46	1	0	31	4	20	51	8	1	51	9	19	22
4	10	29	3	9	22	14	4	27	30	7	15	3	5	0	22
5	3	3	38	2	2	24	2	14	27	6	5	40	0	6	50
6	7	8	13	6	12	35	0	1	24	4	26	17	7	13	17
7	11	12	49	10	22	45	9	18	21	3	16	54	2	19	45
8	9	28	6	7	14	27	9	24	59	3	0	6	10	0	44
9	2	2	41	11	24	38	7	11	57	1	20	43	5	7	12
10	6	7	16	4	4	48	4	28	54	0	11	20	0	13	39
11	10	11	51	8	14	59	2	15	51	11	1	57	7	20	7
12	8	27	9	5	6	41	2	22	29	10	15	9	3	1	7
13	1	1	44	9	16	52	0	9	26	9	5	46	10	7	34
14	5	6	19	1	27	2	9	26	23	7	26	23	5	14	2
15	9	10	54	6	7	12	7	13	20	6	17	1	0	20	29
16	7	26	11	2	28	55	7	19	59	6	0	12	8	1	29
20	6	25	14	0	21	9	0	17	29	1	15	15	1	1	51
40	1	20	28	1	12	17	1	4	57	3	0	31	2	3	42
60	8	15	43	2	3	26	1	22	26	4	15	46	3	5	33
80	3	10	57	2	24	35	2	9	55	6	1	1	4	7	24

MENSIBUS INEUNTIIBUS.

<i>Menſe</i>	s	o	l	s	o	l	s	o	l	s	o	l	s	o	l
<i>Jan.</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>Feb.</i>	5	1	37	3	27	35	10	10	24	11	9	53	4	20	41
<i>Mart.</i>	3	1	9	6	20	33	0	21	44	8	12	3	8	27	45
<i>Apr.</i>	8	2	46	10	18	7	11	2	7	7	21	56	1	18	26
<i>Maii</i>	6	23	42	10	4	10	6	22	50	6	9	15	6	4	35
<i>Junii</i>	11	25	19	2	1	45	5	3	14	5	19	8	10	25	16
<i>Julii</i>	10	16	15	1	17	47	0	23	56	4	6	27	3	11	25
<i>Aug.</i>	3	17	52	5	15	22	11	4	20	3	16	20	8	2	6
<i>Sept.</i>	8	19	30	9	12	56	9	14	44	2	26	13	0	22	48
<i>Octob.</i>	7	10	25	8	28	59	5	5	27	1	13	32	5	8	56
<i>Nov.</i>	0	12	2	0	26	33	3	15	51	0	23	25	9	29	38
<i>Dec.</i>	11	2	58	0	12	36	11	6	33	11	10	44	2	15	46

*MEDII MOTUS SATELLITUM SATURNI
IN DIEBUS.*

<i>Die- bus.</i>	<i>Primi</i>	<i>Secundi</i>	<i>Tertii</i>	<i>Quarti</i>	<i>Quinti</i>
0	s o /	s o /	s o /	s o /	s o /
1	6 10 42	4 11 32	2 19 41	0 22 35	0 4 32
2	0 21 24	8 23 4	5 9 23	1 15 9	0 9 5
3	7 2 6	1 4 36	7 29 4	2 7 44	0 13 37
4	1 12 47	5 16 8	10 18 46	3 0 18	0 18 9
5	7 23 29	9 27 40	1 8 27	3 22 53	0 22 41
6	2 4 11	2 9 12	3 28 8	4 15 28	0 27 14
7	8 14 53	6 20 45	6 17 50	5 8 2	1 1 46
8	2 25 35	11 2 17	9 7 31	6 0 37	1 6 18
9	9 6 17	3 13 49	11 27 13	6 23 12	1 10 51
10	3 16 58	7 25 21	2 16 54	7 15 46	1 15 23
11	9 27 40	0 6 53	5 6 36	8 8 21	1 19 55
12	4 8 22	4 18 25	7 26 17	9 0 55	1 24 28
13	10 19 4	8 29 57	10 15 58	9 23 30	1 29 0
14	4 29 46	1 11 29	1 5 40	10 16 5	2 3 32
15	11 10 28	5 23 1	3 25 21	11 8 39	2 8 4
16	5 21 10	10 4 33	6 15 3	0 1 14	2 12 37
17	0 1 51	2 16 5	9 4 44	0 23 49	2 17 9
18	6 12 33	6 27 37	11 24 25	1 16 23	2 21 41
19	0 23 15	11 9 10	2 14 7	2 8 58	2 26 14
20	7 3 57	3 20 42	5 3 48	3 1 32	3 0 46
21	1 14 39	8 2 14	7 23 30	3 24 7	3 5 18
22	7 25 21	0 13 46	10 13 11	4 16 42	3 9 50
23	2 6 3	4 25 18	1 2 53	5 9 16	3 14 23
24	8 16 44	9 6 50	3 22 34	6 1 51	3 18 55
25	2 27 26	1 18 22	6 12 15	6 24 26	3 23 27
26	9 8 8	5 29 54	9 1 57	7 17 0	3 28 0
27	3 18 50	10 11 26	11 21 38	8 9 35	4 2 32
28	9 29 32	2 22 58	2 11 20	9 2 9	4 7 4
29	4 10 14	7 4 30	5 1 1	9 24 44	4 11 37
30	10 20 55	11 16 2	7 20 42	10 17 19	4 16 9
31	5 1 37	3 27 35	10 10 24	11 9 53	4 20 41

In Anno Biflexili post Februarium adde unius Diei Motum.

MEDII MOTUS SATELLITUM SATURNI
IN HORIS.

Hor.	Primi	Secundi	Tertii	Quarti	Quinti
0	s o /	s o /	s o /	o / //	o / //
1	0 7 57	0 5 29	0 3 19	0 56 26	0 11 20
2	0 15 53	0 10 58	0 6 38	1 52 53	0 22 41
3	0 23 50	0 16 26	0 9 58	2 49 19	0 34 2
4	1 1 47	0 21 55	0 13 17	3 45 46	0 45 23
5	1 9 44	0 27 24	0 16 36	4 42 12	0 56 44
6	1 17 40	1 2 53	0 19 55	5 38 39	1 8 5
7	1 25 37	1 8 22	0 23 15	6 35 6	1 19 25
8	2 3 34	1 13 51	0 26 34	7 31 33	1 30 46
9	2 11 31	1 19 20	0 29 53	8 27 59	1 42 7
10	2 19 27	1 24 48	1 3 12	9 24 26	1 53 27
11	2 27 24	2 0 17	1 6 31	10 20 52	2 4 48
12	3 5 21	2 5 46	1 9 51	11 17 19	2 16 8
13	3 13 18	2 11 15	1 13 10	12 13 45	2 27 29
14	3 21 14	2 16 44	1 16 29	13 10 11	2 38 50
15	3 29 11	2 22 13	1 19 48	14 6 37	2 50 11
16	4 7 8	2 27 41	1 23 8	15 3 4	3 1 31
17	4 15 5	3 3 10	1 26 27	15 59 31	3 12 52
18	4 23 1	3 8 39	1 29 46	16 55 58	3 24 12
19	5 0 58	3 14 8	2 3 5	17 52 24	3 35 32
20	5 8 55	3 19 37	2 6 24	18 48 51	3 46 53
21	5 16 52	3 25 6	2 9 44	19 45 18	3 58 14
22	5 24 48	4 0 34	2 13 3	20 41 44	4 9 35
23	6 2 45	4 6 3	2 16 22	21 38 10	4 20 56
24	6 10 42	4 11 32	2 19 41	22 34 37	4 32 17
25	6 18 39	4 17 1	2 23 1	23 31 3	4 43 38
26	6 26 35	4 22 30	2 26 20	24 27 30	4 54 58
27	7 4 32	4 27 59	2 29 39	25 23 56	5 6 19
28	7 12 29	5 3 27	3 2 58	26 20 23	5 17 40
29	7 20 26	5 8 56	3 6 18	27 16 49	5 29 1
30	7 28 22	5 14 25	3 9 37	28 13 15	5 40 22

TABULA LATITUDINARIA SATELLITUM
MEDII MOTUS SATELLITUM SATURNI
IN MINUTIS HORARIIS.

	Satell. I.	Satell. II.	Satell. III.	Satell. IV.	Satell. V.		Satell. I.	Satell. II.	Satell. III.	Satell. IV.	Satell. V.	
Sec. Min.	/	''	/	''	/	''	/	''	/	''	/	''
1	0	8	0	5	0	3	0	56	0	11		
2	0	16	0	11	0	7	1	53	0	23		
3	0	24	0	16	0	10	2	49	0	34		
4	0	32	0	22	0	13	3	46	0	45		
5	0	40	0	27	0	17	4	42	0	57		
6	0	48	0	33	0	20	5	39	1	8		
7	0	56	0	38	0	23	6	35	1	19		
8	1	4	0	44	0	27	7	31	1	30		
9	1	12	0	49	0	30	8	28	1	42		
10	1	19	0	55	0	33	9	24	1	53		
11	1	27	1	0	0	37	10	20	2	5		
12	1	35	1	6	0	40	11	17	2	16		
13	1	43	1	11	0	43	12	14	2	28		
14	1	51	1	17	0	46	13	10	2	39		
15	1	59	1	22	0	50	14	7	2	50		
16	2	7	1	28	0	53	15	3	3	1		
17	2	15	1	33	0	56	16	0	3	13		
18	2	23	1	39	1	0	16	56	3	24		
19	2	31	1	44	1	3	17	52	3	36		
20	2	39	1	50	1	6	18	49	3	47		
21	2	47	1	55	1	10	19	46	3	58		
22	2	55	2	1	1	13	20	42	4	9		
23	3	3	2	6	1	10	21	38	4	21		
24	3	11	2	12	1	20	22	35	4	32		
25	3	19	2	17	1	23	23	31	4	43		
26	3	27	2	22	1	26	24	27	4	55		
27	3	35	2	28	1	30	25	24	5	6		
28	3	42	2	33	1	33	26	20	5	17		
29	3	50	2	39	1	36	27	17	5	29		
30	3	58	2	44	1	40	28	13	5	40		
31	4	6	2	50	1	43	29	10	5	52		
32	4	14	2	55	1	46	30	6	6	3		
33	4	22	3	1	1	50	31	3	6	14		
34	4	30	3	6	1	53	32	0	6	26		
35	4	38	3	12	1	56	32	57	6	37		
36	4	46	3	17	2	0	33	54	6	48		
37	4	54	3	23	2	3	34	50	7	0		
38	5	2	3	28	2	6	35	46	7	11		
39	5	10	3	34	2	9	36	42	7	22		
40	5	18	3	39	2	13	37	38	7	34		
41	5	26	3	45	2	16	38	34	7	45		
42	5	34	3	50	2	19	39	30	7	56		
43	5	42	3	56	2	23	40	27	8	8		
44	5	50	4	1	2	26	41	23	8	19		
45	5	58	4	7	2	29	42	20	8	30		
46	6	5	4	12	2	33	43	16	8	42		
47	6	13	4	18	2	36	44	13	8	53		
48	6	21	4	23	2	39	45	10	9	4		
49	6	29	4	29	2	43	46	6	9	16		
50	6	37	4	34	2	46	47	2	9	27		
51	6	45	4	40	2	49	47	58	9	38		
52	6	53	4	45	2	53	48	54	9	50		
53	7	1	4	50	2	56	49	51	10	1		
54	7	9	4	56	2	59	50	48	10	12		
55	7	17	5	1	3	3	51	44	10	23		
56	7	25	5	7	3	6	52	40	10	35		
57	7	33	5	12	3	9	53	37	10	46		
58	7	41	5	18	3	13	54	34	10	58		
59	7	49	5	23	3	16	55	30	11	9		
60	7	57	5	29	3	19	56	26	11	20		

TABULA LATITUDINARIA SATELLITUM SATURNI.

Argu- ment. Lati- tudi- nis.	Sig. 0. Bor. 6. Auf.								Sig. 1. Bor. 7. Auf.								Sig. 2. Bor. 8. Auf.								Gr.	
	Satellitum				Satellitris				Satellitum				Satellitris				Satellitum				Satellitris					
	I.	II.	III.	IV.	V.				I.	II.	III.	IV.	V.				I.	II.	III.	IV.	V.					
	Inclinat.	Reduct.	Inclin.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.	Inclinat.	Reduct.				
0	0	0	0	0	0	0	0	0	0	14	29	3	26	7	26	0	51	25	39	3	41	12	57	0	52	30
1	0	30	0	8	0	15	0	2	14	55	3	31	7	40	0	52	25	56	3	37	13	5	0	51	29	
2	1	0	0	16	0	31	0	4	15	22	3	35	7	53	0	53	26	12	3	33	13	13	0	50	28	
3	1	30	0	24	0	46	0	6	15	48	3	39	8	6	0	54	26	27	3	28	13	20	0	49	27	
4	2	0	0	32	1	2	0	8	16	14	3	42	8	19	0	55	26	42	3	23	13	27	0	47	26	
5	2	30	0	40	1	17	0	10	16	40	3	46	8	32	0	55	26	57	3	18	13	34	0	46	25	
6	3	0	0	48	1	33	0	12	17	5	3	49	8	45	0	56	27	11	3	12	13	41	0	45	24	
7	3	30	0	56	1	48	0	14	17	31	3	52	8	58	0	57	27	24	3	7	13	47	0	44	23	
8	3	59	1	4	2	4	0	16	17	56	3	55	9	10	0	57	27	37	3	1	13	53	0	42	22	
9	4	29	1	12	2	19	0	18	18	21	3	58	9	22	0	58	27	49	2	55	13	59	0	41	21	
10	4	59	1	19	2	34	0	20	18	45	4	0	9	35	0	58	28	2	2	48	14	4	0	39	20	
11	5	28	1	27	2	50	0	22	19	9	4	2	9	47	0	59	28	13	2	41	14	10	0	37	19	
12	5	58	1	34	3	5	0	24	19	33	4	3	9	58	0	59	28	24	2	34	14	15	0	35	18	
13	6	27	1	42	3	20	0	26	19	56	4	5	10	10	0	59	28	34	2	27	14	20	0	34	17	
14	6	57	1	49	3	35	0	27	20	20	4	6	10	21	0	59	28	44	2	19	14	24	0	32	16	
15	7	26	1	56	3	50	0	29	20	43	4	6	10	33	0	59	28	53	2	12	14	28	0	30	15	
16	7	55	2	3	4	5	0	31	21	5	4	7	10	44	0	59	29	1	2	4	14	32	0	28	14	
17	8	24	2	10	4	20	0	33	21	27	4	7	10	55	0	59	29	9	1	56	14	36	0	27	13	
18	8	53	2	17	4	35	0	34	21	49	4	7	11	6	0	59	29	17	1	47	14	40	0	25	12	
19	9	22	2	24	4	50	0	36	22	10	4	6	11	16	0	59	29	24	1	39	14	43	0	23	11	
20	9	51	2	30	5	5	0	38	22	31	4	6	11	26	0	59	29	30	1	30	14	46	0	21	10	
21	10	19	2	37	5	19	0	39	22	52	4	5	11	36	0	58	29	35	1	22	14	49	0	19	9	
22	10	48	2	43	5	34	0	41	23	12	4	3	11	46	0	58	29	41	1	13	14	51	0	17	8	
23	11	16	2	49	5	48	0	43	23	32	4	2	11	56	0	57	29	45	1	4	14	53	0	15	7	
24	11	44	2	55	6	2	0	44	23	51	4	0	12	5	0	57	29	49	0	55	14	55	0	13	6	
25	12	12	3	1	6	17	0	45	24	11	3	58	12	14	0	56	29	52	0	46	14	56	0	11	5	
26	12	40	3	6	6	31	0	46	24	29	3	55	12	23	0	56	29	55	0	37	14	57	0	9	4	
27	13	7	3	11	6	45	0	48	24	47	3	52	12	32	0	55	29	57	0	28	14	58	0	7	3	
28	13	34	3	16	6	59	0	49	25	5	3	49	12	41	0	54	29	59	0	19	14	59	0	4	2	
29	14	2	3	21	7	12	0	50	25	22	3	45	12	49	0	53	30	0	0	10	15	0	0	2	1	
30	14	29	3	26	7	26	0	51	25	39	3	41	12	57	0	52	30	0	0	0	15	0	0	0	0	
Sig. 11. Auf. 5. Bor.								Sig. 10. Auf. 4. Bor.								Sig. 9. Auf. 3. Bor.								Gr.		

De Tabulis Satellitum Saturni.

HÆ Tabulæ motuum Satellitum Saturni meræ *Cassinianæ* sunt, ad Meridianum *Londinensem* stylumq; *Julianum* redactæ; quas inter *Acta Academiæ Regiæ Parisiensis* Anni 1716, præstantissimus *Astronomus* D. *Jacobus Cassinus* nunc primum edidit, quasque nostris in *Philosophica Transact.* N° 356, utpote raptim confectis, merito prætulimus. Abunde quidem sufficiunt Tabulæ ad distinguendos inter se Satellites, & ad eorum Loca juxta *Saturnum* indigitanda, qui aliàs ob parvitatem, oculis hebetioribus, ni rectè collimant, ægre in conspectum venirent: Nondum tamen eas ultimam Celeberrimi Authoris manum recepisse constat; sed potius Publico donari, ut earum ope commode prævideant *Astronomi* eas observandi opportunitates, quæ ad emendendam Theoriam motuum plurimum conferre poterunt.

Supponuntur autem Periodi horum Satellitum, quibus revolvuntur ad *Æquinoctium*, sive ad principium *Arietis*, scilicet
Primi sive *Intimi* $1^D. 21^H. 18' 27''$. *Secundi* *Penintimi* $2^D. 17^H. 41' 22''$.
Tertii sive *Medii* $4^D. 12^H. 25' 12''$. *Quarti* *Hugeniani* $15^D. 22^H. 41' 12''$.
Quinti sive *Extimi* $79^D. 7^H. 47' 0''$. Posito autem, (juxta Regulam Naturæ saltem in hoc nostro Systemate universalem, quæq; tam in Jovialium ac Lunæ motibus, quam Planetarum primariorum circa Solem obtinet) Vires centrum *Saturni* petentes esse in duplicata ratione Distantiarum reciproce, atq; adeo Cubos Distantiarum a Centro ejus esse ut quadrata Temporum Periodicorum; ex data Distantiâ & Periodo *Quarti*, reliquorum Distantiæ consequuntur.

Nuperis autem Observationibus, ingenti radio Telescopii *Regalis Societatis* 120 Pedes superante, ope *Micrometri* artificiosissimi, invenit D. *Pound* rationem Distantiæ Satellitis *Quarti* & maximi a centro *Saturni*, ad Semidiametrum *Annuli* ejus ut 374 ad 43, sive ut 8,7 ad 1 proxime; rationem vero Diametri *Annuli* ad illam *Globi* esse ut 7 ad 3. Proinde inito Calculo proveniunt Distantiæ ut sequitur.

	Semidiam. Annuli.	Semidiam. Globi h.		Semidiam. Annuli.	Semidiam. Globi h.
<i>Primi</i>	2,097	4,893	<i>Quarti</i>	8,698	20,295
<i>Secundi</i>	2,686	6,268	<i>Quinti</i>	25,348	59,154
<i>Tertii</i>	3,752	8,754			

Maii autem 29°. 10^b hujus Anni 1719 *St. Vet.* eodem Observatore ac Instrumentis, visus est *Quartus*, in maxima fere ejus a Planeta digressionem orientali, distare a Centro *Saturni*, tunc $III. 7^{\circ}. 41'$ occupantis, tria Minuta prima cum septem Secundis. Unde computo rite instituto, fit ratio Distantiæ hujus Satellitis a *Saturno* ad Distantiam *Solis* a *Terra*, ut 8,25 ad 1000, e qua cæterorum Distantiæ æstimari poterunt.

Supponit autem D. *Cassinus* Satellites quatuor Interiores secundum Planum *Annuli* moveri, sive eorum Orbitas ad Planum Orbis *Saturni* angulo triginta graduum Inclinari: *Saturno* enim juxta medium Sign. *Geminorum* & *Sagittarii* existente, *Annuli* tum latissime patentis Axis major satis præcise duplus invenitur minoris, ac Ellipses semper Annulari similes describere videntur hi Satellites; inq; maximis suis a Planeta digressionibus, in Axe majori *Annuli* producto reperiuntur: quæ quidem fieri nequeunt, ni Satellitum Orbes cum *Annuli* Plano eundem propemodum situm haberent.

Nuper vero *Annuli* *Nodos*, præstantissimis Telescopiis & Oculis sane plusquam Lynceis, perscrutatus est præclarus *Astronomus* D. *Maraldus*; ut in *Actis Acad. Reg. Parisiensis* Annorum 1715 & 1716 videre est. Demonstrat enim Observationibus perquam subtilibus, Planum *Annuli* Anno 1715 interfecasse Planum Orbis *Saturni* ad Grad. $19^{\circ} 45'$ Min. *Virginis* & *Piscium*; ac concesso Inclinationis Angulo 30 Grad. idem *Annuli* Planum cum Plano *Eclipticæ* sive Orbe *Terræ* occurrisset ad $16^{\circ} \frac{1}{4}$ III & X , sub Inclinatione $31^{\circ} 20'$.

Ut itaq; ad datum Tempus cognoscantur accuratè tam Ellipseos Annularis, quam earum quas Satellites describunt, Positio, Species punctumq; vere *Apogæum* & *Perigæum*, resolvendum est Triangulum Sphæricum obliquangulum, modo inter Præcepta Calculi Latitudinum Jovialium supra monstrato.

Cum autem Latitudo *Terræ* respectu Orbis *Saturni* vix unquam excedat quartam gradus partem, ea in hoc negotio, hæctenus parum explorato, tuto negligi potest, quasi in eodem Plano moveretur uterq; Planeta. Proinde è loco Geocentrico *Saturni* subducantur 5 Sig. $19^{\circ} 45'$, ac restabit Argumentum Latitudinis; cum quo, in Tabulâ Latitudinariâ Satellitum I. II. III. IV, capiatur Inclination, qui est Angulus quo radius visualis a *Terrâ* ad *Saturnum* ductus super Orbes Satellitum illorum inclinatur; cuiusq; Sinus est ad Radium ut minores Orbium apparentium Diametri ad majores: Ejusdemq; Speciei fit Ellipsis *Annuli*, Semicirculo *Apogæo Boream* respiciente, si Argumentum Latitudinis minus sit sex Signis, *Austrum* vero si majus. Addidimus etiam Tabulam Reductionum, ad cognitionem veri *Apogæi* Satellitum, in tantâ Planorum Inclinatione, necessario requisitam.

Quintum autem & exteriorem Satellitem in Orbe a cæteris multum diverso circumferri, nuper deprehendit laudatus D. *Cassinus*; Nodo ejus Ascendente apud $5^{\circ} 00'$ III reperto, cum Angulo Inclinationis 15° tantum graduum, sive prioris dimidio. Quapropter huic etiam Tabulam Inclinationum & Reductionum accommodavimus.

SYNOPSIS ASTRONOMIÆ
COMETICÆ.

QUA

COMETARUM

Haftenus debite observatorum

Motus in Orbe Parabolico

REPRÆSENTANTUR.

EORUMQUE

Qui Annis MDCLXXX & MDCLXXXII fulsere

Post certas Periodos redeuntium,

Motus in Orbibus Ellipticis

accurato calculo subjiciuntur.

SYNOPSIS ASTRONOMIAE

COMMENTICAE

Q U A

COMETARUM

Hactenus debite observatorum

Motus in Orbe Parabolico

REPRESENTANTUR.

FORUMQUE

Qui Annis MDCLXXX & MDCLXXXII scribere

Post certas Periodos redeuntium.

Motus in Orbibus Ellipticis

accurato calculo subjiciuntur.

LIII

SYNOPSIS

ASTRONOMIÆ COMETICÆ.

VETERES *Ægyptii & Chaldei*, siqua fides *Diodoro Siculo*, longa observationum serie instructi, Cometarum *ἀπολλὰς* prænuntiare valuerunt. Cum autem iisdem artibus etiam Terræ-motus ac Tempestatē prævidisse dicantur, extra dubium est Astrologiæ potius calculo fatidico, quam Astronomicis motuum Theoriis eorum de his rebus scientiam referendam esse. Ac vix alia à *Græcis* utriusque populi victoribus reperta est apud eos doctrina; adeo ut eam, quam nunc eousque proveximus Astronomiam, *Græcis* ipsis, præsertim magno *Hipparcho*, uti Inventoribus, acceptam debeamus. Apud hos vero *Aristotelis* sententia, qui Cometas nihil aliud esse voluit quam Vapores sublunares vel etiam Meteora aerea, tantum effecit, ut hæc Astronomicæ scientiæ pars longe subtilissima, omnino neglecta manserit; cum nemini operæ pretium visum fuerit, vagas & incertas fluitantium in æthere vaporum semitas adnotare scriptisque mandare; unde factum ut ab illis nihil certi de motu Cometarum ad nos transmissum reperiatur.

Seneca autem Philosophus, perpensis duorum insignium sui temporis Cometarum Phænomenis, non dubitavit iis loca inter Corpora cœlestia assignare, Sydera esse cum Mundo duratura existimans, quanquam Motus eorum legibus nondum compertis regi fateatur. Tandemque Vaticinio non irritō promittit, aliquando futura secula, quibus hæc tam occulta *dies extraheret ac longioris ævi diligentia*; quibusque admirationi foret hæc *Veteres* nescire potuisse; postquam *Demonstraverit aliquis Naturæ Interpres in quibus Cœli partibus Cometæ errent, quanti qualesque sint*. Ab hac autem *Senecæ* sententia in diversas partes abiit pene omnis Astronomorum cohors; ac ipse *Seneca* neque Phænomena Motus quibus opinionem hanc tueretur, neque tempora adscribere dignatus est, quæ Posteris ad hæc definienda usui forent. Ac evolutis plurimis Cometarum Historiis, nihil omnino invenio quod huic negotio inservire possit, ante annum à *Christo* nato 1337, quo *Nicephorus Gregoras* Historicus & Astronomus *Constantinopolitanus* nobis Cometæ semitam inter Fixas satis accurate descripsit; Tempora autem nimis laxè consignavit, ita ut non nisi quod abhinc quadringentis pene Annis apparuerit, lubricus & incertus hic Cometa Catalogo quem

damus

damus inferi mereatur. Dein Cometa Anni 1472 omnium velocissimus ac terris proximus *Regiomontanum* habuit observatorem. Hic magnitudine ac Comâ terribilis, unius diei spatio 40 gradus sub circulo Cœli maximo emensus est, ac omnium primus est de quo observata idonea ad nos pervenere. Quotquot autem Cometas considerarunt, usque ad tempora *Tychonis Brahe* magni illius Astronomiæ restauratoris, eos sublunares esse autumârunt, adeoque parvi penderunt, utpote pro Vaporibus habitos.

Anno autem 1577, *Tychone* jam studio Astrorum serio incumbente, comparatisque Machinis ingentibus pro dimetiendis cœli arcubus, majori cum cura & certitudine quam Veteribus sperare fas erat; emerfit Cometa satis conspicuus, cui observando strenue sese accinxit *Tycho*: multisque & fidis Experimentis deprehendit, nulli quæ sentiretur Parallaxi diurnæ obnoxium fuisse, adeoque non tantum non fuisse Vaporem aereum, sed & etiam multo superiorem extitisse Lunâ: Imo nihil obstabat, quin inter ipsos Planetas collocaretur; frustra interim contra obstrepentibus Scholasticorum nonnullis.

Tychonis vero eximiam in observando industriam excepit *Kepleri* sagacissimum & pene divinum ingenium. Hic *Tychonis* laboribus fretus Systema Mundi verum & Physicum adinvenit, ac scientiam Astronomicam in immensum auxit; Monstrato sc. Planetas omnes in Planis per Solis centrum transeuntibus revolvi, Curvasque Ellipticas describere, ea lege, ut Area Sectorum Ellipticorum, ad centrum Solis in Ellipseos foco constituti, temporibus quibus describantur arcus semper proportionales sint. Invenit etiam Distantias Planetarum à Sole esse in sesquialtera ratione Temporum periodicorum, sive Cubos Distantiarum esse ut Quadrata Temporum. Tanto autem Artifici affulsere duo Cometæ, quorum alter maxime illustris. Ex horum observatis conclusit *Keplerus*, non uno Parallaxis annuæ indicio, Cometas inter Orbes Planetarum liberrime quaquaversum ferri, motu quidem non multum à rectilineo diverso, sed quem nondum definire licuit. Ac *Hevelius Tychonis* æmulus, *Kepleri* vestigiis insistens, eandem Hypothesim Motus rectilinei amplexus est, ipse plurium Cometarum Observator perquam subtilis. Cum Cœlo tamen Calculum suum non penitus consentire questus est, Viamque Cometicam versus Solem incurvari suboluit.

Tandem de summo Cœlo lapsus est prodigiosus ille Cometa Anni 1680, quasi Casu perpendiculari Solem petens, & exinde pari cum velocitate assurgens: Hic per quatuor Menses continuos visus, insigni ac peculiari Curvitate Orbitæ ad investigationem Motus Theoriæ præ cæteris idoneus erat: Instructis autem jampridem Regiis Observatoriis, *Parisiensi* & *Grenovicensi*, ac Astronomorum

morum Clarissimorum curæ commissis, accidit ut hujus Cometæ Motus apparens, quantum forsan mortalibus fas est, accuratissime à *Cassino & Flamsteedio* observaretur.

Non multo post, dum Geometrarum facile Princeps *D. Newtonus* operam dabat *Principiis Philosophiæ Mathematicis*; non solum *Inventa Kepleri* in Systemate Planetario necessariò locum habere demonstravit, verum etiam Cometarum Phænomena omnia ex iisdem Principiis evidenter consequi. Id quod exemplo prædicti Cometæ Anni 1680 abunde illustravit, modumque docuit Geometricè construendi Orbitas Cometarum; Problemaque arduum ac tanto Oedipo dignum summa cum omnium admiratione solutum dedit. Cometam autem hunc in Orbe ad sensum Parabolico Solem circumiisse probat, ita ut *Areæ* ad Centrum Solis æstimatæ Temporibus proportionales fuerint.

Tanti Viri vestigia infecutus eandem methodum Calculo Arithmetico accommodare aggressus sum, nec irritò conamine. Undique enim conquisitis Cometarum Observationibus, Tabellam hanc, immensi pene Calculi fructum, obtinui; exiguum quidem sed non ingratum Astronomis munus. Hi etenim Numeri vim habent omnia quæ de motu Cometarum hætenus observata sunt sat accuratè repræsentandi, ope solius Tabulæ Generalis insequentis, cui adornandæ nullis sane peperci laboribus, ut perfecta prodiret, utpote Posteritati consecrata ac cum Scientia Astronomica duratura.

Constat autem hæc Elementorum Tabula decem columellis, quarum *Prima* habet Annos quo visi sunt Cometæ. *Secunda* ac *Tertia* situs Planorum Orbium Cometicorum exhibent, nempe quibus Eclipticæ punctis Nodi Ascendentes temporibus apparitionum hærebant, & quo Angulo ad Planum ejus inclinabantur Orbes. *Quarta* habet Loca Periheliorum, sive Verticum Orbium Parabolicorum in Orbibus ipsis æstimatæ. *Quinta* dat distantias minimas Cometarum à Sole in Periheliis suis, in ejusmodi partibus quales media Solis à Terrâ distantia habet centies millenas. In *Sexta* habentur Logarithmi rationum istarum distantiarum ad mediam illam Solis distantiam. *Septima* continet Logarithmos mediorum motuum diurnorum, tempore quo peragit Cometa nonaginta gradus Orbis sui à Perihelio in centenas partes dividi supposito. *Octava* exhibet tempora æquata Periheliorum in Meridiano *Londinensi* & Stylo *Juliano*. *Nona* dat Angulos in planis Orbium inter Perihelia & Nodos Ascendentes interceptos, quorum ope paulo paratior fit calculus. *Decima* deniq; monstrat qui moti fuerant Cometæ secundum Seriem Signorum, qui vero è contra Retrogradi fuerant.

MOTUUM COMETARUM IN ORBE PARABOLICO ELEMENTA ASTRONOMICAE.

Cometæ Anni.	Nodus Ascend.	Inclin. Orbis.	Perihelion.	Distantia Perihelii à Sole.	Logarithmus Distantiæ Pe- riheliæ à Sole.	Logarithmus Medii Motus Diurni.	Temp. Equat. Perihel.	Perihel. à Nudo.	
	° / "	° / "	° / "				D. H. /	° / "	
1337	II 24 21 0	32 11 0	Ø 7 59 0	40666	9 609236	0 546274	Jan. 2 6 25	46 22 0	Retrog.
1472	VS 11 46 20	5 20 0	Ø 15 33 30	54273	9 734584	0 358252	Feb. 28 22 23	123 47 10	Retrog.
1531	Ø 19 25 0	17 56 0	W 1 39 0	56700	9 753583	0 329754	Aug. 24 21 18	107 46 0	Retrog.
1532	II 20 27 0	32 36 0	Ø 21 7 0	50910	9 706803	0 399924	Oct. 19 22 12	30 40 0	Direct.
1556	III 25 42 0	32 6 30	VS 8 50 0	46390	9 660424	0 460492	Apr. 21 20 3	103 8 0	Direct.
1577	Υ 25 52 0	74 32 45	Ø 9 22 0	18342	9 263447	1 064958	Oct. 26 18 45	103 30 0	Retrog.
1580	Υ 18 57 20	64 40 0	Ø 19 5 50	59628	9 775450	0 296953	Nov. 28 15 0	90 8 30	Direct.
1585	Ø 7 42 30	6 4 0	Υ 8 51 0	109358	0 038850	9 901853	Sept. 27 19 20	28 51 30	Direct.
1590	III 15 30 40	29 40 40	III 6 54 30	57661	9 760882	0 318805	Jan. 29 3 45	51 23 50	Retrog.
1596	W 12 12 30	55 12 0	III 18 16 0	51293	9 710058	0 395041	Jul. 31 19 55	83 56 30	Retrog.
1607	Ø 20 21 0	17 2 0	W 2 16 0	58680	9 768490	0 307393	Oct. 16 3 50	108 5 0	Retrog.
1618	II 16 1 0	37 34 0	Υ 2 14 0	37975	9 579498	0 590881	Oct. 29 12 23	73 47 0	Direct.
1652	II 28 10 0	79 28 0	Υ 28 18 40	84750	9 928140	0 067918	Nov. 2 15 40	59 51 20	Direct.
1661	II 22 30 30	32 35 50	Ø 25 58 40	44851	9 651772	0 482470	Jan. 16 23 41	33 28 10	Direct.
1664	II 21 14 0	21 18 30	Ø 10 41 25	102575½	0 011044	9 943562	Nov. 24 11 52	49 27 25	Retrog.
1665	III 18 2 0	76 5 0	II 11 54 30	10649	9 027309	1 419164	Apr. 14 5 15	156 7 30	Retrog.
1672	VS 27 30 30	83 22 10	Ø 16 59 30	69739	9 843476	0 194914	Feb. 20 8 37	109 29 0	Direct.
1677	III 26 49 10	79 3 15	Ø 17 37 5	28059	9 448072	0 788020	Apr. 26 0 37	99 12 5	Retrog.
1680	VS 2 2 0	60 56 0	f 22 39 30	00612½	7 787106	3 279469	Dec. 8 0 6	9 22 30	Direct.
1682	Ø 21 16 30	17 56 0	W 2 52 45	58328	9 765877	0 311313	Sept. 4 7 39	108 23 45	Retrog.
1683	III 23 23 0	83 11 0	II 25 29 30	56020	9 748343	0 337614	Jul. 3 2 50	87 53 30	Retrog.
1684	f 28 15 0	65 48 40	III 28 52 0	96015	9 982339	0 986620	Mai. 29 10 16	29 23 0	Direct.
1686	¶ 20 34 40	31 21 40	II 17 0 30	32500	9 511883	0 692304	Sept. 6 14 33	86 25 50	Direct.
1698	f 27 44 15	11 46 0	VS 0 51 15	69129	9 839660	0 200638	Oct. 8 16 57	3 7 0	Retrog.

**TABULA GENERALIS MOTUUM COMETARUM
IN ORBE PARABOLICO.**

Med. Mot. Com.	Angulus à Perihelio.	Differen- tia An- gulorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.	Med. Mot. Com.	Angulus à Perihelio.	Differen- tia An- gulorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.
	° ' "	° ' "				° ' "	° ' "		
0	0 0 0		0,000000		30	41 45 47		0,059009	
1	1 31 40	1 31 40	0,000077	77	31	42 55 6	1 9 19	0,062400	3391
2	3 3 15	1 31 35	0,000309	232	32	44 3 20	1 8 14	0,065838	3438
3	4 34 43	1 31 28	0,000694	385	33	45 10 29	1 7 9	0,069319	3481
4	6 6 0	1 31 17	0,001231	537	34	46 16 35	1 6 6	0,072839	3520
5	7 37 1	1 31 1	0,001921	690	35	47 21 36	1 5 1	0,076396	3557
		1 30 42		838			1 3 57		3588
6	9 7 43	1 30 19	0,002759	986	36	48 25 33	1 2 54	0,079984	3616
7	10 38 2	1 29 52	0,003745	1131	37	49 28 27	1 1 52	0,083600	3644
8	12 7 54	1 29 23	0,004876	1275	38	50 30 19	1 0 49	0,087244	3666
9	13 37 17	1 28 50	0,006151	1413	39	51 31 8	0 59 48	0,090910	3686
10	15 6 7	1 28 13	0,007564	1551	40	52 30 56	0 58 48	0,094596	3704
		1 27 34		1683			0 57 48	0,098300	3719
11	16 34 20	1 26 53	0,009115	1811	41	53 29 44	0 56 49	0,102019	3733
12	18 1 54	1 26 7	0,010798	1941	42	54 27 32	0 55 51	0,105752	3738
13	19 28 47	1 25 20	0,012609	2057	43	55 24 21	0 54 54	0,109490	3750
14	20 54 54	1 24 30	0,014550	2176	44	56 20 12	0 53 57	0,113240	3755
15	22 20 14	1 23 38	0,016607	2289	45	57 15 6	0 53 1	0,116995	3761
		1 22 46		2398			0 52 7	0,120756	3762
16	23 44 44	1 21 47	0,018783	2499	46	58 9 3	0 51 14	0,124518	3760
17	25 8 22	1 20 52	0,021072	2601	47	59 2 4	0 50 20	0,128278	3757
18	26 31 8	1 19 53	0,023470	2693	48	59 54 11	0 49 29	0,132035	3757
19	27 52 55	1 18 52	0,025969	2782	49	60 45 25	0 48 38	0,135792	3752
20	29 13 47	1 17 51	0,028570	2871	50	61 35 45	0 47 48	0,139544	3747
		1 16 49		2948			0 46 58	0,143291	3738
21	30 33 40	1 15 47	0,031263	3028	51	62 25 14	0 46 12	0,147029	3733
22	31 52 32	1 14 42	0,034045	3097	52	63 13 52	0 45 23	0,150762	3720
23	33 10 23	1 13 39	0,036916	3165	53	64 1 40	0 44 37	0,154482	3710
24	34 27 12	1 12 34	0,039864	3228	54	64 48 38	0 43 52	0,158192	3698
25	35 42 59	1 11 29	0,042892	3286	55	65 34 50	0 43 8	0,161890	3688
		1 10 24		3341			0 42 26	0,165578	3676
26	36 57 41		0,045989		56	66 20 13		0,169254	
27	38 11 20		0,049154		57	67 4 50			
28	39 23 54		0,052382		58	67 48 42			
29	40 35 23		0,055668		59	68 31 50			
30	41 45 47		0,059009		60	69 14 16			

**TABULA GENERALIS MOTUUM COMETARUM
IN ORBE PARABOLICO.**

Med. Mot. Com.	Angulus à Perihelio.	Differen- tia An- gulorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.	Med. Mot. Com.	Angulus à Perihelio.	Differen- tia An- gulorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.
	° ' "	° ' "				° ' "	° ' "		
60	69 14 16		0,169254		90	85 54 27		0,271092	
		0 41 42		3660			0 26 7		3084
61	69 55 58	0 40 58	0,172914	3643	91	86 20 34	0 25 46	0,274176	3063
62	70 36 56	0 40 20	0,176557	3631	92	86 46 20	0 25 23	0,277239	3045
63	71 17 16	0 39 40	0,180188	3615	93	87 11 43	0 25 12	0,280284	3022
64	71 50 56	0 39 1	0,183803	3601	94	87 36 45	0 24 42	0,283306	3002
65	72 35 57	0 38 18	0,187404	3574	95	88 1 27	0 24 21	0,286308	2983
66	73 14 15	0 37 41	0,190978	2562	96	88 25 48	0 24 0	0,289291	2960
67	73 51 59	0 37 7	0,194540	3545	97	88 49 48	0 23 42	0,292251	2944
68	74 29 6	0 36 32	0,198085	3529	98	89 13 30	0 23 24	0,295195	2927
69	75 5 38	0 35 57	0,201614	3508	99	89 36 54	0 23 6	0,298122	2908
70	75 41 35	0 35 21	0,205122	3490	100	90 0 0	0 45 14	0,301030	5752
71	76 16 56	0 34 47	0,208612	3468	102	90 45 14	0 44 4	0,306782	5678
72	76 51 43	0 34 14	0,212080	3449	104	91 29 18	0 42 56	0,312460	5600
73	77 25 57	0 33 44	0,215529	3434	106	92 12 14	0 41 50	0,318060	5527
74	77 59 41	0 33 13	0,218963	3415	108	92 54 4	0 40 48	0,323587	5455
75	78 32 54	0 32 42	0,222378	3394	110	93 34 52	0 39 48	0,329042	5382
76	79 5 36	0 32 9	0,225772	3371	112	94 14 40	0 38 50	0,334424	5312
77	79 37 45	0 31 39	0,229143	3347	114	94 53 30	0 37 52	0,339736	5243
78	80 9 24	0 31 10	0,232490	3329	116	95 31 22	0 37 0	0,344979	5174
79	80 40 34	0 30 42	0,235819	3308	118	96 8 22	0 36 8	0,350153	5109
80	81 11 16	0 30 15	0,239127	3289	120	96 44 30	0 35 18	0,355262	5044
81	81 41 31	0 29 48	0,242416	3268	122	97 19 48	0 34 29	0,360306	4978
82	82 11 19	0 29 21	0,245684	3249	124	97 54 17	0 33 43	0,365284	4916
83	82 40 40	0 28 54	0,248933	3226	126	98 28 0	0 32 57	0,370200	4852
84	83 9 34	0 28 30	0,252159	3207	128	99 0 57	0 32 14	0,375052	4792
85	83 38 4	0 28 4	0,255366	3186	130	99 33 11	0 30 32	0,379844	4732
86	84 6 8	0 27 41	0,258552	3168	132	100 4 43	0 31 52	0,384576	4674
87	84 33 49	0 27 16	0,261720	3145	134	100 35 35	0 30 13	0,389250	4618
88	85 1 5	0 26 53	0,264865	3124	136	101 5 48	0 29 34	0,393868	4560
89	85 27 58	0 26 29	0,267989	3103	138	101 35 22	0 28 57	0,398428	4502
90	85 54 27		0,271092		140	102 4 19		0,402930	

TABULA GENERALIS MOTUUM COMETARUM IN ORBE PARABOLICO.

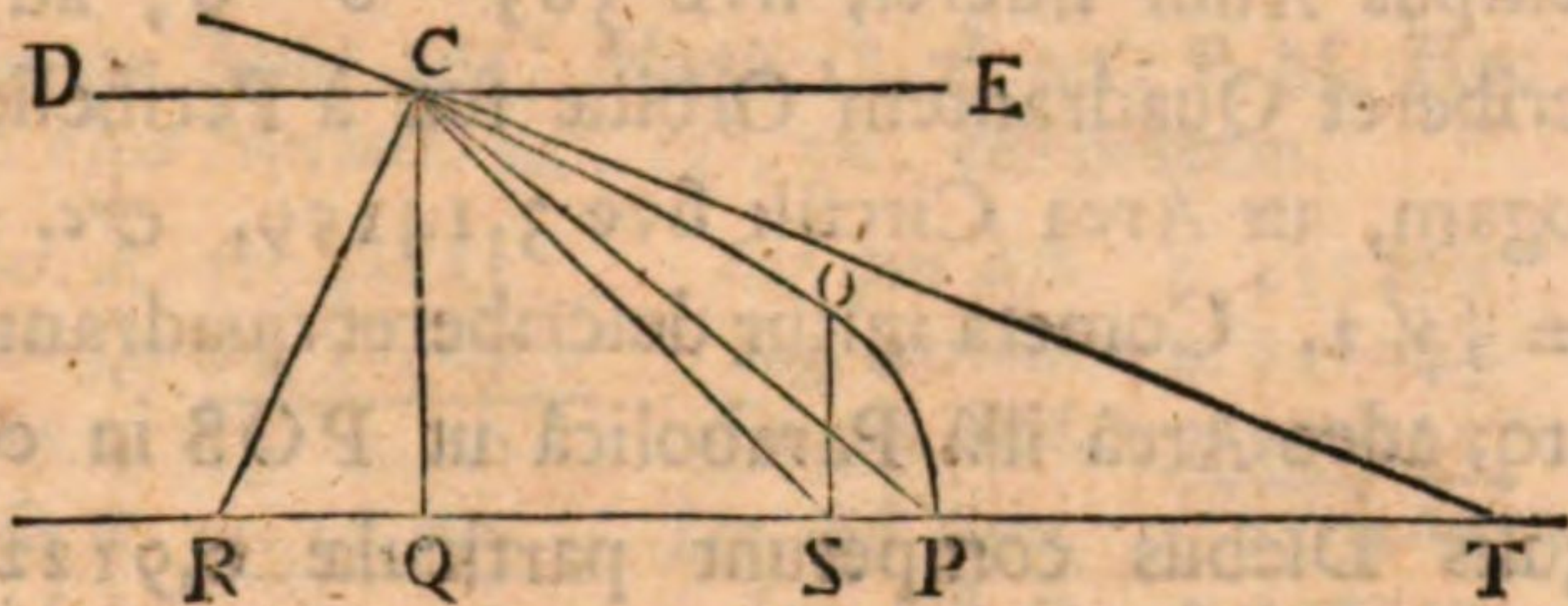
Med. Mot. Com.	Angulus à Perihelio.	Diffe- rentia Angu- lorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.	Med. Mot. Com.	Angulus à Perihelio.	Diffe- rentia Angu- lorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.
	° ' "	' "				° ' "	' "		
140	102 4 19	28 22	0,402930	4450	200	113 4 0	33 25	0,516984	6422
142	102 32 41	27 50	0,407380	4404	204	113 37 25	32 27	0,523406	6299
144	103 0 31	27 17	0,411784	4348	208	114 9 52	31 31	0,529705	6181
146	103 27 47	26 44	0,416132	4298	212	114 41 23	30 39	0,535886	6072
148	103 54 31	26 12	0,420430	4246	216	115 12 2	29 49	0,541958	5964
150	104 20 43	25 39	0,424676	4190	220	115 41 51	29 1	0,547922	5860
152	104 46 22	25 11	0,428866	4146	224	116 10 52	28 15	0,553782	5756
154	105 11 33	24 43	0,433012	4098	228	116 39 7	27 31	0,559538	5661
156	105 36 16	24 16	0,437110	4054	232	117 6 38	26 49	0,565199	5563
158	106 0 32	23 51	0,441164	4014	236	117 33 27	26 8	0,570762	5471
160	106 24 23	23 24	0,445178	3966	240	117 59 35	25 30	0,576233	5383
162	106 47 47	22 57	0,449144	3916	244	118 25 5	24 52	0,581616	5296
164	107 10 44	22 33	0,453060	3876	248	118 49 57	24 17	0,586912	5210
166	107 33 17	22 10	0,456936	3836	252	119 14 14	23 42	0,592122	5130
168	107 55 27	21 47	0,460772	3795	256	119 37 56	23 10	0,597252	5049
170	108 17 14	21 24	0,464567	3751	260	120 1 6	22 38	0,602301	4973
172	108 38 38	21 2	0,468318	3712	264	120 23 44	22 8	0,607274	4900
174	108 59 39	20 41	0,472030	3675	268	120 45 52	21 38	0,612174	4824
176	109 20 20	20 20	0,475705	3635	272	121 7 30	21 9	0,616998	4752
178	109 40 40	20 0	0,479340	3597	276	121 28 39	20 43	0,621750	4688
180	110 0 40	19 40	0,482937	3561	280	121 49 22	20 16	0,626438	4618
182	110 20 20	19 21	0,486498	3524	284	122 9 3	19 50	0,631056	4552
184	110 39 41	19 3	0,490022	3490	288	122 29 28	19 26	0,635608	4490
186	110 58 44	18 44	0,493512	3453	292	122 48 54	19 3	0,640098	4427
188	111 17 28	18 27	0,496965	3419	296	123 7 57	18 39	0,644525	4368
190	111 35 55	18 10	0,500384	3385	300	123 26 36	45 4	0,648893	10666
192	111 54 5	17 53	0,503769	3352	310	124 11 40	42 56	0,653559	10321
194	112 11 58	17 36	0,507121	3320	320	124 54 36	40 58	0,659880	9996
196	112 29 34	17 21	0,510441	3288	330	125 35 34	39 10	0,679876	9692
198	112 46 55	17 5	0,513729	3255	340	126 14 44	37 28	0,689568	9402
200	113 4 0		0,516984		350	126 52 12		0,698970	

**TABULA GENERALIS MOTUUM COMETARUM
IN ORBE PARABOLICO.**

Med. Mot. Com.	Angulus à Perihelio.	Diffe- rentia Angu- lorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.	Med. Mot. Com.	Angulus à Perihelio.	Differen- tia An- gulorum.	Logarith- mus pro di- stantiâ à Sole.	Diffe- rentia Loga- rithm.
	° ' "	' "				° ' "	° ' "		
350	126 52 12		0,698970		800	141 28 3		0,963082	
		35 54		9134			0 21 21		7754
360	127 28 6		0,708104	8872	820	141 49 24	0 20 36	0,970836	7561
370	128 2 33	34 27	0,716976	8630	840	142 10 0	0 19 56	0,978397	7374
380	128 35 38	33 5	0,725606	8400	860	142 29 56	0 19 14	0,985771	7199
390	129 7 27	31 49	0,734006	8180	880	142 49 10	0 18 38	0,992970	7030
400	129 38 4	30 37	0,742186	7974	900	143 7 48	0 18 3	1,000000	6871
		29 30					0 17 30	1,006871	6715
410	130 7 34	28 28	0,750160	7770	920	143 25 51	0 16 57	1,013586	6569
420	130 36 2	27 28	0,757930	7586	940	143 43 21	0 16 28	1,020155	6428
430	131 3 30	26 32	0,765516	7402	960	144 0 18	0 16 0	1,026583	6293
440	131 30 2	25 39	0,772918	7230	980	144 16 46	4 53 22	1,032876	125312
450	131 55 41	24 49	0,780148	7068	1000	144 32 46	3 0 7	1,158188	87870
		24 2		6910	1500	149 26 8	2 6 5	1,246058	67645
460	132 20 30	23 18	0,787216	6756	2000	152 26 15	1 35 7	1,313703	54975
470	132 44 32	22 35	0,794126	6612	2500	154 32 20	1 15 22	1,368678	46295
480	133 7 50	21 55	0,800882	6475	3000	156 7 27	1 1 45	1,414973	39951
490	133 30 25	41 58	0,807494	12553	3500	157 22 49	0 52 2	1,454924	35201
500	133 52 20	39 38	0,813969	12061	4000	158 24 34	0 44 36	1,490125	31396
		37 32		11604	4500	159 16 36	0 38 53	1,521521	28353
520	134 34 18	35 38	0,826522	11182	5000	160 1 12	0 34 19	1,549874	25844
540	135 13 56	33 51	0,838583	10786	5500	160 40 5	0 30 36	1,575718	23742
560	135 51 28	32 16	0,850187	10420	6000	161 14 24	0 27 34	1,599460	21957
580	136 27 6	30 45	0,861369	10074	6500	161 45 0	0 25 0	1,621417	20421
600	137 0 57	29 23	0,872155	9752	7000	162 12 34	0 22 49	1,641838	19084
		28 8		9449	7500	162 37 34	0 20 57	1,660922	17912
620	137 33 13	26 56	0,882575	9162	8000	163 0 23	0 19 22	1,678834	16874
640	138 3 58	25 51	0,892649	8895	8500	163 21 20	0 17 56	1,695708	15954
660	138 33 21	24 49	0,902401	8642	9000	163 40 42	0 16 42	1,711662	15122
680	139 1 29	23 51	0,911850	8402	9500	163 58 38	6 36 40	1,726784	471176
700	139 28 25	22 59	0,921012	8173	10000	164 15 20	1 53 44	2,197960	201695
		22 8		7958				2,399655	
720	139 54 16		0,929907		50000	170 52 0			
740	140 19 5		0,938549		100000	172 45 44			
760	140 42 56		0,946951						
780	141 5 55		0,955124						
800	141 28 3		0,963082						

Tabulæ Generalis Constructio & Usus.

UT Planetæ in Orbibus Ellipticis, ita Cometæ (ut dictum est) in Parabolicis Solem in Foco communi situm ambiunt, ea lege ut Areæ æquales æqualibus temporibus describantur. Quoniam vero Parabolæ omnes sunt Curvæ similes, si eductis è Foco rectis, determinata aliqua pars Areæ Parabolæ cujusvis dividatur utcunque, in omnibus Parabolis fiet similis divisio sub iisdem Angulis, ac distantia à Foco erunt respectivè proportionales: Proinde una nostra Tabula pro Cometis omnibus sufficiet. Calculi autem hujus Tabulæ hæc est ratio. In Schemate sit S Sol, P O C orbita Cometæ, P Perihelion, O Locus ubi Cometa quadrante distat à Perihelio, C Locus quivis alius. Junge CP, CS, ac fiant ST, SR æquales ipsi CS, & ductis rectis CR, CT, (quarum altera tanget Curvam in C, altera vero eidem perpendicularis erit) in Axem PSR demitte normalem CQ. Jam datâ areâ quacunque $COPS = a$, oporteat angulum CSP & distantiam CS inquirere.



Quoniam ob naturam Parabolæ recta RQ ubiq; æqualis est dimidio Lateris recti, ponatur Latus rectum = 2, adeoq; RQ = 1; ac sit CQ = z, proinde PQ = $\frac{1}{2}z^2$, ac Segmentum Parabolicum COP = $\frac{1}{12}z^3$; Triangulum autem CSP erit = $\frac{1}{4}z$: Unde Area mixtilinea COPS erit = $\frac{1}{12}z^3 + \frac{1}{4}z = a$, ac $z^3 + 3z = 12a$. Quare resoluta hac æquatione Cubica, z five ordinatim applicata CQ innotescet. Proponatur jam Area OPS in partes centesimas dividenda. Hæc Area duodecima pars est quadrati è Latere recto, adeoq; $12a$ æquantur quadrato illo = 4. Si itaque successivè extrahantur radices æquationum $z^3 + 3z = 0,04 : 0,08 : 0,12 : 0,16$, &c. habebuntur totidem z five ordinatim applicatæ CQ respectivè, ac divisa erit Area SOP in partes centum æquales. Eodemq; prorsus modo continuandus est calculus ultra Locum O. Cum autem RQ sit = 1, radix hujus Æquationis sit Tangens Tabularis anguli CRQ five dimidii anguli CSP, adeoq; angulus CSP datur. Ejusdemq; anguli CRQ Secans RC media proportionalis est inter RQ = 2PS & RT quæ dupla est ipsius SC, ut ex Conicis notissimum est. Est igitur SP ad SC in duplicatâ ratione Radii ad Secantem anguli dimidii à Perihelio Cometæ; vel si mavis, in ratione quam habet Sinus Versus anguli CSR, five anguli ab Aphelio Cometæ, ad Diametrum

Tabula Generalis Constructio & Usus.

metrum Circuli. His jactis fundamentis præcedentem Tabulam elaboravi, representandis omnium Cometarum motibus inservientem: Nullus enim ex hæcenus observatis motus Parabolici Leges quoad sensum recusat.

Restat jam præcepta Calculi tradere, modumq; supputandi locum Cometæ visum ex his Numeris exhibere. Cometæ autem in Parabolâ moventis Velocitas ubiq; est ad velocitatem Planetæ gyrantis in Circulo circa Solem, ad eandem a Sole distantiam, ut $\sqrt{2}$ ad 1; ut constat ex *Principiis Philos. Nat. Math. Lib. I. Prop. 16. Coroll. 7.* Si itaque Cometa in Perihelio ad distantiam æqualem distantia Terræ à Sole supponatur, foret Area diurna à Cometa descripta ad Aream quam describit Terra ut $\sqrt{2}$ ad 1, ac proinde tempus Anni sideris, sive $365^D. 6^H. 9'$, ad Tempus quo Cometa talis describeret Quadrantem Orbitæ suæ à Perihelio, sive Aream spatio POS analogam, ut Area Circuli sive 3,14159, &c. ad Aream parabolicam $= \frac{4}{3} \times \sqrt{\frac{1}{2}}$ $= \frac{2}{3} \sqrt{2}$. Cometa igitur describeret quadrantem illum Diebus $109^D. 14^H. 46'$, atq; adeo Areâ illâ Parabolicâ ut POS in centum particulas distributâ, singulis Diebus competunt particulae 0,912280, cujus Logarithmus nempe 9,960128 in perpetuum usum servandus. Tempora autem quibus Cometæ in distantis majoribus vel minoribus Quadrantes similes describerent, sunt ut Revolutiones in Circulis, hoc est in sesquuplicata ratione Distantiarum; adeoq; Areæ diurnæ in partibus centesimis Quadrantum æstimatæ (quas quidem Centesimas medii Motus mensuras, instar graduum Anomalix, ponimus) sunt in singulis in subsesquialtera ratione Distantiarum à Sole in Perihelio.

His necessario præmissis proponatur alicujus è Cometis nostris Locum visum ad datum Tempus supputare. Ac primum habeatur in promptu Locus Solis ab Æquinoctio, cum Logarithmo Distantiæ ejusdem a Terra. 2°. Capiatur intervallum Temporis inter Tempus datum & Tempus Perihelii è columnâ octavâ Elementorum sumptum, in Diebus & Diei partibus decimalibus. Hujus numeri Logarithmo addatur Logarithmus constans 9,960128 ac complementum Arithmeticum sesquialterius Logarithmi Distantiæ Periheliæ à Sole Summa erit Logarithmus medii Motus Cometæ in prima Columna *Tabula Generalis* quærendi. Idem autem compendiosius habetur ope Logarithmi medii Motus Diurni in Columnâ septimâ, Logarithmo Temporis simpliciter addendi. 3°. Cum Motu medio capiatur in Tabulâ correspondens angulus à Perihelio, & Logarithmus pro Distantia à Sole: Ac in Cometis Directis adde, in Retrogradis subduc, si fuerit Tempus post Perihelion; vel in Directis subduc & in Retrogradis adde, si fuerit ante Perihelion, angulum sic inventum a loco vel ad locum Perihelii in columnâ quartâ; & habebitur Locus Cometæ

Tabulæ Generalis Constructio & Usus.

tæ in Orbe proprio. Ac ad Logarithmum pro Distantia ibidem inventum addatur Logarithmus Distantiæ Periheliæ (Colum. VI.) summa erit Logarithmus Distantiæ veræ Cometæ à Sole. 4°. Cum loco Cometæ in Orbita, dato loco Nodi (Colum. II.) capiatur Distantia Cometæ à Nodo; ac datâ Inclinatione Plani (Colum. III.) dabuntur, notissimis *Trigonometria* præceptis, locus Cometæ ad Eclipticam reductus, cum Inclinatione sive Latitudine Helio-centricâ, ac Distantiæ curtatæ Logarithmus. 5°. Ex his datis, iisdem omnino Regulis quibus loca Planetarum, ex dato loco & Distantiâ Solis obtinebitur Cometæ locus visus seu Geocentricus, cum Latitudine visâ. Hoc autem Exemplo uno vel altero forsan operæ pretium erit illustrare.

EXEMPL. I. Quæritur Locus Cometæ Anni 1664 Martii 1°. 7^h. 00'. P. M. Hoc est 96^d. 19^h. 8'. post Perihelion ejus Novemb. 24°. 11^h. 52'. celebratum.

Log. dist. Perihel.	0.011044	Perihel. Ω	10.41.25	Log. pro dist.	0.255369
Log. Sesquialt.	0.016566	Ang. Corresp.	83.38.05—	Log. Perihel.	0.011044
Comp. Arith.	9.983434	Com. in Orb. $\propto$	17.3.20	Co-sin. Incl.	9.990754
	9.960128	$\propto$ II	21.14.00.	Log. dist. Curt.	0.257167
Log. Temp.	1.985862	Com. à Nodo	34.10.40.	Log. dist. $\odot$	9.997939
Log. Med. Mot.	1.929424	Red. ad Eclip.	32.19.05.	$\odot$ $\propto$	21.44.33
Medius Motus	85,001	Com. Helioc. $\propto$	18.54.55.	Com. Visus $\propto$	29.18.20
		Inc'in. Bor.	11.46.50.	Lat. Visa	8.36.15. Bor.

EXEMPL. II. Quæritur Locus Cometæ Anni 1683 Julii 23°. 13^h. 35'. P. M. Londini. Vel 13^h. 40'. Temp. æquat. Hoc est 21^d. 10^h. 50'. post Perihelion.

Log. dist. Perihel.	9.748343	Perihel. Π	25.29.30	Log. pro dist.	0.111336
Log. Sesquialt.	9.622514	Ang. Corresp.	56.47.20	Log. Perihel.	9.748343
Comp. Arith.	0.377486	Com. in Orb. γ	28.42.10	Co-sin Incl.	9.913187
	9.960128	$\propto$ $\propto$	23.23.00	Log. dist. Curt.	9.772866
Log. Temp.	1.310723	Com. à $\propto$	35.19.10	Log. dist. $\odot$	0.006062
Log. Med. Mot.	1.648337	Red. ad Eclip.	4.48.30	$\odot$ Locus Ω	10.39.14
Medius Motus	44,498	Com. Helioc. $\propto$	28.11.30	Com. Visus $\propto$	5.11.28
		Inclin. Bor.	35.2.00	Lat. Bor.	28.52.13

Horâ autem primi Exempli, seorsim observatum est ab *Auzoutio* & *P. Gottignio* Cometam applicari ad Stellam secundam *Arietis*; ita ut novem vel decem minutis illâ borealior repertus sit, quoad longitudinem vero quasi conjunctus. In secundo autem Exemplo ipse, in viciniâ *Londini*, Instrumentis quibus olim *Stellas Australes* observaveram, Cometæ locum deprehendi $\odot$. 5°. 11' $\frac{1}{2}$, cum Latitudine Boreali 28°. 51'; consentiente ad amussim observatione *Grenovicensi* eodem pene momento factâ.

Cometa autem Anni 1680, qui pene Solem attigit, (non enim triente femidiametri corporis Solaris à superficie ejus distabat in Perihelio) cum Latus

O o o o

rectum

Tabulæ Generalis Constructio & Usus.

rectum exiguum admodum sit, Tabulâ Generali haud coerceri potuit, ob immanem Motus medii velocitatem : Præstat itaque in hoc Cometa, postquam inventus fuerit Motus ejus medius, ex eodem, ope præcedentis æquationis $z^3 + 3z = \frac{4}{1-\frac{1}{e}}$ *Mot. med.* Tangentem dimidii anguli à Perihelio elicere, una cum Logarithmo pro distantia à Sole. Quibus datis iisdem omnino regulis ac in cæteris procedendum est.

Ad hunc itaque modum Astronomico Lectori examinare licet numeros à me positos, quos summâ curâ ex observationibus quæ suppetebant exantlavi; neque enim, antequam probe ad incudem redacti fuerant, ac multo studio quantum fieri possit politi, in publicum prodire. Monendus autem est Lector, quinque priores ordine Cometas, quorum tertius & quartus est à *Petro Apiano* observatus, quintus vero à *Paulo Fabricio*, uti & decimus à *Michaelæ Mæstlino* Anno 1596 conspectus, non eundem certitudinis gradum cum reliquis præ se ferre: neque enim debitis organis nec curâ ad hoc requisitâ observationes ipsæ peractæ sunt; adeoque inter se dissidentes nullo modo cum computo regulari conciliari possunt. Cometam Anni 1684 unus vidit *Cl. Blanchinus* Observator *Romanus*: ultimum vero Anni sc. 1698 *Parisienses* soli conspexerunt, ejusque cursum insolito modo designarunt. Obscurus hic admodum, etiamsi velox ac Terris satis vicinus, nostros fane Oculos alioquin non incuriosos effugit. Insignes autem duos hac nostra ætate Cometas, alterum Anno 1689 Mense *Novembri* ortum, alterum Mense *Februario* Anni 1702, Catalogo subungere non licuit, propter defectum Observationum. Etenim versus Mundi plagas Australes cursum dirigentes, ac in *Europâ* vix conspicui, contemplatores non habuere negotio pares.

Collatis autem inter se horum Cometarum motuum Elementis, videre est nullo ordine dispositos esse Orbitas; neque ipsos, Planetarum more, Zodiaco comprehendi posse, quaquaversum tam Retrograde quam Directe indifferenter latos: unde manifestum est eos Motu Vorticali nullo modo circumagi. Quinetiam distantia Periheliæ nunc majores nunc minores reperiuntur; unde pronum est suspicari etiam multo plures esse Cometas, qui in partibus à Sole remotioribus, obscuri caudâque destituti, adeoque nobis inconspicui, præterlabi possunt.

Haftenus Cometarum Orbes consideravimus ut perfectè Parabolicos; quo supposito consequeretur Cometas, Vi Centripeta versus Solem impulsos, à spatiis infinite distantibus descendere, casuque suo velocitatem tantam acquirere, ut iterum in spatia Mundi remotissima sese abdere possint, perpetuo nisu sursum tendentes, nec ad Solem unquam reversuri. Cum autem satis frequentes sint Cometarum adventus; ac eorum nullus reperiatur motu ferri Hyperbolico,

De Motu Cometarum in Orbibus Ellipticis.

bolico, seu velociore quam cadendo ad Solem acquirere debeat, credibile est potius in Orbibus valde Eccentricis eos revolvi circa Solem, ac post longissimas Periodos reverti. Sic enim Numerus eorum præfinitus esset, ac fortasse non usque adeo magnus. Spatia autem inter Solem Fixasque tanta sunt, ut Cometæ revolventi cum Periodo quantumvis longâ satis loci sit. Latus autem rectum Ellipsis est ad Latus rectum Parabolæ eandem Periheliam distantiam habentis, ut distantia Aphelia in Ellipsi est ad Axem totum Ellipseos; Velocitates autem sunt in dimidiata ratione Laterum rectorum: quapropter in Orbibus valde Eccentricis ratio hæc accedit proximè ad rationem æqualitatis. Tantilla autem differentia quæ intercedit, ratione majoris in Parabola velocitatis, facillime in situ Orbis determinando compensatur. Tabulæ itaq; Elementorum Motuum usus præcipuus est, atque etiam propter quem illam construere operæ pretium duxi, ut, siquando novus Cometa emerferit, possimus collatis Elementis dignoscere an poterit esse aliquis ex antiquis, necne; ac proinde Periodum Orbitæque Axem determinare, reditumque prædicere.

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Confectâ jam ante plures annos Elementorum Tabulâ præmissâ, statim subodoratus sum, ex situ consimili Planorum & Periheliorum, unum eundemq; fuisse Cometam tertia vice in Orbe Elliptico revolutum, qui annis 1531, 1607, & 1682 conspecti sunt. Verum cum Periodorum & Inclinationum diversitas aliquanto nimia huic nostræ suspicioni adversari videretur, ac priorum *Apiani* & *Kepleri* observata parum accurata, ne dicam rudia, tam subtili negotio enucleando vix paria esse judicarem; contentus eram, cum hanc Synopsin prima vice, anno sc. 1705, ederem, conceptus hos meos, aliqua saltem probabilitatis specie fultos, indicasse; Posterosque ut reditum ejus, juxta annum 1758 expectandum, sedulò præstolarentur monuisse. Postea vero quam, evolutis Cometarum antiquiorum Catalogis, Tres alios deprehenderam, eodem plane ordine, paribusq; temporis intervallis, dictos Tres præcessisse (nempe anno 1305 circa *Pascham*, anno 1380 sed incerto Mense, ac deinde anno 1456 Mense *Junio*) priorem sententiam paulo audentius tueri cœpi: Et compos factus methodi quâ calculus in Orbe Elliptico quantumvis Eccentrico accuratè & perfacile absolvitur, loco Orbis Parabolici Cometæ anni 1682 inter Elementa descripti, Ellipsi Magnitudine & Specie datæ, in cujus Foco Sol, ad Eclipticæ planum Terræq; in eâ motum ita Positionem coaptare aggressus sum, ut omnia Dⁿⁱ *Flamstedii* de hoc

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hoc Cometâ observata, prægrandi ac peraccurato Sextante capta, & à Refractionibus debitè purgata, Theoriam nostram computi rigorosi examini subiectam abunde comprobarent.

Manifestum autem est duas hujus Cometæ Periodos **CLI** annis proximè peragi, singulas vero alternatim majores & minores provenire **LXXVI** & **LXXV** annorum circiter: Proinde sumptâ Periodo mediâ septuaginta quinque cum semisse annorum (per *Prop. 15. Lib. I. Princip. Philos. Natur.*) fit semi-

axis major Orbis Cometæ ad mediam Terræ à Sole distantiam, ut $75\frac{1}{2}$, hoc est ut 17,8635 ad 1. Inventâ autem distantîâ Periheliâ observationibus maxime congruâ partium istarum 0,5825, fit Eccentricitas Orbis 17,2810, unde semi-axis minor 4,5246. Hujus Ellipseos Planum ad Planum Eclipticæ inclinatum reperi angulo $17^{\circ}. 42'$, Nodumque habere ascendentem ad $\odot 20^{\circ}. 48'$; Perihelion vero Cometæ, in hoc Plano Retrogradi, ad $\infty 1^{\circ}. 36'$, sive $109^{\circ}. 12'$ post Nodum Ascend. Et Tempus æquatum Perihelii *Septemb. 4^o. 21^h. 22'*.

Motus autem medius ejus diurnus pars erat $\frac{1}{75\frac{1}{2}}$ Motus medii diurni Solis,

sive $0^{\circ}. 0'. 47''$ quam proximè; & existente radio 1, arcûs $0'. 47''$ longitudo, hoc est 0,000227843, est ut Motus diurnus Cometæ in extremitate Axis minoris, & eam habet rationem ad circumferentiam Circuli, quam habet dies unus ad Tempus Periodicum, quamq; habet Area Elliptica, quotidie radiis ad Solem ductis intercepta, ad Aream totius Ellipseos; quamque proinde commodè pro mensurâ Motûs medii Cometæ usurpari poterit. Hujus itaq; Logarithmus 6,357636, Logarithmo Temporis à Perihelio additus, dat Logarithmum medii Motûs ad datum Tempus, sive rationis Areæ, inter locum Cometæ in Orbe suo ac Perihelion radio ad Solem ducto abscissæ, ad Aream totam Ellipseos.

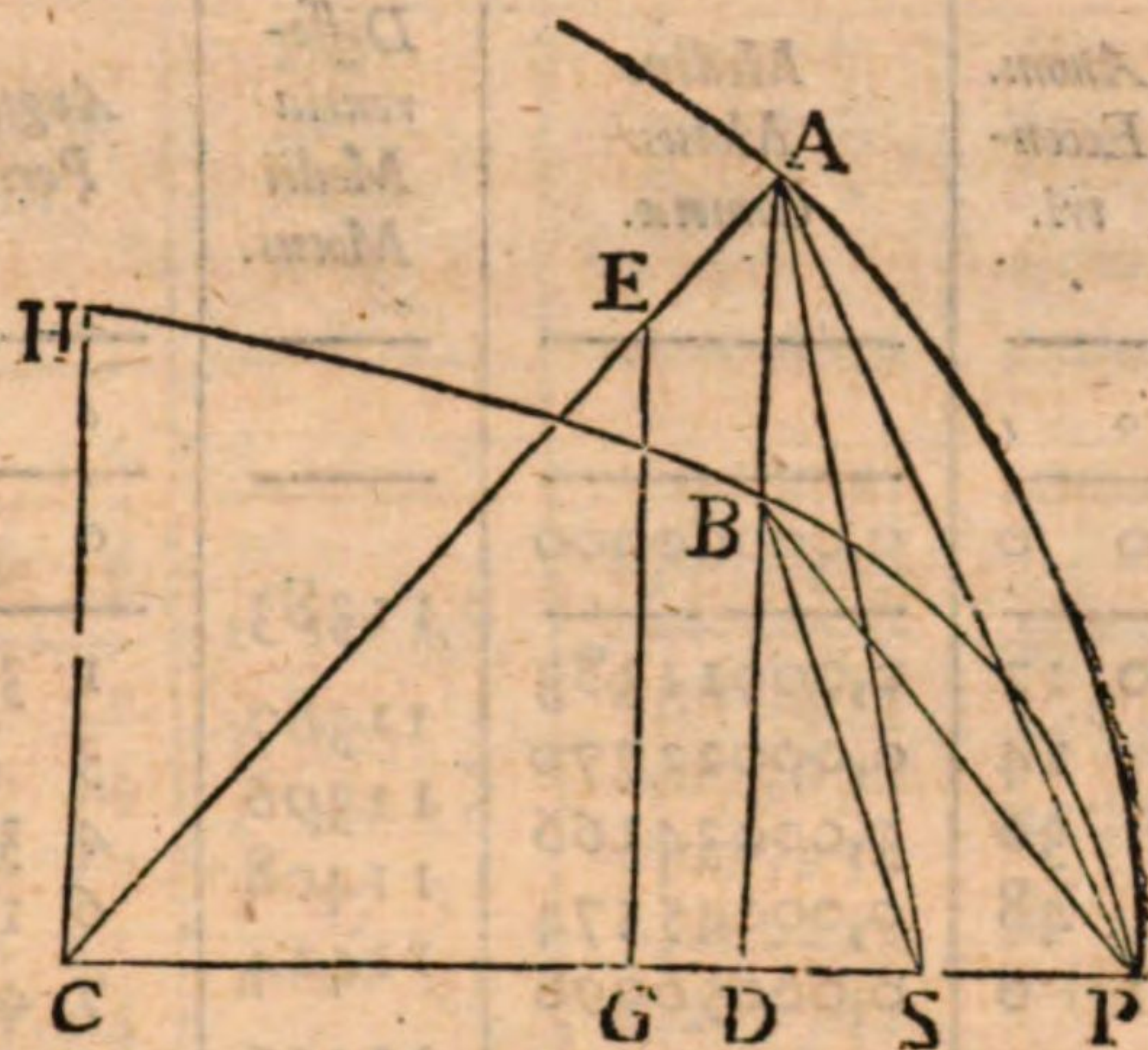
Componitur autem hæc Area è duabus, nempe ex Areâ Trianguli cujus Basis est distantia Perihelia Cometæ & altitudo ordinatim applicata, & ex Areâ Segmenti chordâ de vertice Ellipsis ad Cometam ductâ intercepti: Id quod fortasse nonnullis utile erit Schemate plenius exponi.

Orbis Cometæ Elliptici **PBH** sit **CP** semiaxis major, **CH** semiaxis minor, **PA** circulus Ellipsi circumscriptus, & **S** Focus; unde **PS** distantia Perihelia & **CS** Eccentricitas Orbis. Sit Cometæ locus in **B**, à quo ducatur ordinatim applicata ad Axem **BD**, quæ producta occurrat circulo in **A**, ac jungantur rectæ **AP**, **AS**; **BP**, **BS**; & in ductâ **CA** fiat **CE** ipsi **CS** æqualis, & sit ad axem normalis **EG**. Jam constat ex probatissimis *Kepleri* inventis

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inventis, aream $PSAP$ esse ad aream totam Circuli, pariterq; $PSBP$ ad aream totam Ellipseos, ut Tempus quo describeret Cometa arcum BP ad Tempus Periodicum quo revolutionem integram in Ellipsi perageret. Area

autem PSA conflatur è Segmento Circulari APA & Triangulo PSA , ejus quidem Trianguli duplum est $\text{PS} \times \text{AD}$ Sinum anguli ACP ; Segmenti vero duplum est excessus arcus AP supra Sinum AD in radium CP ductus. Ponatur Radius $\text{CP} = 1$, & dicatur $\text{PS} = b$, & datâ areâ quâlibet $\text{PASP} = a$, quærat ur $\text{AD} = z$ Sinus Anomalix Eccentri ACP . Est autem $z b$ duplum Trianguli PSA ; ac juxta Theorema notissimum, arcus



Circularis $AP = z + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, &c. Unde dupla area Segmenti PAP fit $\frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, &c. Ac proinde $2a = bz + \frac{1}{6}z^3 + \frac{3}{40}z^5 + \frac{5}{112}z^7$, &c. Extractâ autem hujus æquationis Radice z , datur Anomalia Eccentri ACP , ejusq; Sinus Verius PD : ac si fiat ut CP ad CS ita PD ad SG , $PG = SG + PS$ erit ipsi BS distantia Cometæ à Sole æqualis. Denique fiat ut CP ad CH ita AD ad BD , qui sinus erit Anomalix veræ five anguli PSB ad radium BS .

Extractio autem Radicis ex hac æquatione minimè obvia est, nec generaliter in omni casu nisi tentando efficienda. Quocirca ad levandam Calculi molestiam, Tabulam sequentem, ejusdem pene formæ cum Tabula Generali pro Motu Parabolico, juxta jam exposita principia concinnavi; cujus ope Cometæ anni 1682 Observata omnia *Grenovicensia* satis apte repræsentantur.

Verum in hac Tabulâ condendâ usus sum artificio quale *Keplerus* in Tabulis suis *Rudolphinis* adhibet. Ponendo enim angulum Anomaliæ Eccentri $A\,C\,P$ æquabiliter augeri, in secundâ Columnâ sub titulo medii Motus habetur dupla Area Spatii mixtilinei $P\,A\,S\,P$, composita ex differentiâ arcûs $A\,P$ & Sinûs AD in Radium $C\,P = 1$, & ex rectangulo $P\,S \times A\,D$ simul sumptis, capiendo scilicet $P\,S$ ad 1 in ratione quam habet semiaxis major 17,8635 ad 0,5825 distantiam Periheliam; unde $P\,S$ fit 0,0326085, ejusq; Logarithmus 8,513331. Columna Quarta exhibet angulum $P\,S\,B$ Anomaliæ veræ à Perihelio; & Sexta Logarithmum rationis quam habet $S\,P$ ad distantiam $S\,B$ respectivè. Cæteræ Columnæ differentias dant priorum, unde paratius sumantur partes proportionales. Hæc autem Tabula non nisi in Ellipsis huic nostræ similibus locum habet.

TABULA MOTUS COMETÆ

ANNIS MDXXXI, MDCVII & MDCLXXXII VISI.

<i>Anom. Eccen- tri.</i>	<i>Medius Motus Cometæ.</i>	<i>Diffe- rentia Medii Motus.</i>	<i>Angulus à Perihelio.</i>	<i>Diffe- rentia Angu- lorum.</i>	<i>Logarith- mus pro di- stantiâ à Sole.</i>	<i>Diffe- rentia Loga- rithm.</i>
0 1			0 1 11	0 1 11		
0 0	0,00000000		0 0 0		0,000000	
		11383		1 33 12		78
0 12	0,00011383	11387	1 33 12	1 33 11	0,000078	
24	0,00022770	11396	3 6 23	1 33 6	0,000314	236
36	0,00034166	11408	4 39 29	1 33 1	0,000706	392
48	0,00045574	11424	6 12 30	1 32 51	0,001254	548
1 0	0,00056998	11445	7 45 21	1 32 42	0,001958	704
		11470	9 18 3	1 32 31	0,002817	859
12	0,00068443	11498	10 50 34	1 32 16	0,003830	1013
24	0,00079913	11532	12 22 50	1 32 0	0,004994	1164
36	0,00091411	11568	13 54 50	1 31 43	0,006311	1317
48	0,00102943	11609	15 26 33	1 31 22	0,007778	1467
2 6	0,00114511	11655	16 57 55	1 31 4	0,009396	1618
		11704	18 28 59	1 30 40	0,011156	1760
12	0,00126120	11758	19 59 39	1 30 14	0,013064	1908
24	0,00137775	11815	21 29 53	1 29 47	0,015115	2051
36	0,00149479	11877	22 59 40	1 29 20	0,017307	2192
48	0,00161237	11942	24 29 0	1 28 50	0,019639	2332
3 0	0,00173052	12014	25 57 50	1 28 19	0,022105	2466
		12087	27 26 9	1 27 46	0,023708	2603
12	0,00184929	12163	28 53 55	1 27 14	0,027441	2733
24	0,00196871	12248	30 21 9	1 26 37	0,030303	2862
36	0,00208885	12332	31 47 46	1 26 3	0,033292	2989
48	0,00220972	12424	33 13 49	1 25 24	0,036403	3111
4 0	0,00233135	12519	34 39 13	1 24 45	0,039636	3233
		12616	36 3 58	1 24 6	0,042987	3351
12	0,00245383	12720	37 28 4	1 23 25	0,046452	3465
24	0,00257715	12826	38 51 29	1 22 44	0,050029	3577
36	0,00270139	12938	40 14 13	1 22 1	0,053715	3686
48	0,00282658	13051	41 36 14	1 21 16	0,057508	3793
5 0	0,00295274	13172	42 57 30	1 20 33	0,061405	3897
			44 18 3		0,065400	3995

TABULA MOTUS COMETÆ

ANNIS MDXXXI, MDCVII & MDCLXXXII VISI.

<i>Anom. Eccen- tri.</i>	<i>Medius Motus Cometa.</i>	<i>Diffe- rentia medii Motus.</i>	<i>Angulus à Perihelio.</i>	<i>Diffe- rentia Angu- lorum.</i>	<i>Logarith- mus pro di- stantiâ à Sole.</i>	<i>Diffe- rentia Loga- rithm.</i>
0			0	0		
6 0	0,00359981		44 18 3		0,065400	
12	0,00373276	13295	45 37 51	I 19 48	0,069493	4093
24	0,00386698	13422	46 56 54	I 19 3	0,073676	4183
36	0,00400251	13553	48 15 10	I 18 16	0,077952	4276
48	0,00413940	13689	49 32 41	I 17 31	0,082315	4363
7 0	0,00427769	13829	50 49 24	I 16 43	0,086762	4447
12	0,00441741	13972	52 5 20	I 15 56	0,091292	4530
24	0,00455861	14120	53 20 28	I 15 8	0,095898	4606
36	0,00470132	14271	54 34 48	I 14 20	0,100580	4682
48	0,00484560	14427	55 48 20	I 13 32	0,105333	4753
8 0	0,00499147	14587	57 1 3	I 12 43	0,110157	4824
12	0,00513898	14751	58 12 58	I 11 55	0,115046	4889
24	0,00528819	14921	59 24 5	I 11 7	0,119999	4953
36	0,00543912	15093	60 34 24	I 10 19	0,125013	5014
48	0,00559179	15267	61 43 53	I 9 29	0,130083	5070
9 0	0,00574626	15447	62 52 34	I 8 41	0,135211	5128
12	0,00590259	15633	64 0 27	I 7 53	0,140389	5178
24	0,00606080	15821	65 7 30	I 7 3	0,145618	5229
36	0,00622095	16015	66 13 46	I 6 16	0,150894	5276
48	0,00638305	16210	67 19 13	I 5 27	0,156216	5322
10 0	0,00654715	16410	68 23 51	I 4 38	0,161579	5363
12	0,00671331	16616	69 27 42	I 3 51	0,166982	5403
24	0,00688156	16825	70 30 45	I 3 3	0,172422	5440
36	0,00705193	17037	71 33 2	I 2 17	0,177898	5476
48	0,00722447	17254	72 34 32	I 1 30	0,183407	5509
11 0	0,00739921	17474	73 35 15	I 0 43	0,188946	5539
12	0,00757621	17700	74 35 11	0 59 56	0,194514	5568
24	0,00775550	17929	75 34 22	0 59 11	0,200109	5595
36	0,00793712	18162	76 32 46	0 58 24	0,205728	5619
48	0,00812111	18399	77 30 27	0 57 41	0,211371	5643
12 0	0,00830751	18640	78 27 22	0 56 55	0,217034	5663

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Hujus etiam Calculi cape Exemplum. Anno 1682 *Augusti* 30^{mo} 7^h. 42' Temp. æquat. *Grenovici*, observatus est, repetitis & limitatis Observationibus, Locus Cometæ, deductâ refractione, in $\sphericalangle$ 15°. 34'. 42'', cum Lat. Boreâ 17°. 24'. 56''. Videamus jam quali successu respondeat computus noster.

Tempus propositum Perihelion Cometæ præcessit 5^d. 13^h. 40', sive in partibus decimalibus, 5^d, 5694. Hujus numeri Logarithmus 0,745811 Logarithmo Motus diurni 6,357636 additus, dat Log. numeri 0,00126896 pro medio Motu Cometæ ante Perihelion. In Tabulâ invenio, ad 2°. 12' Anomalix Eccentri, Medium Motum 0,00126120 minorem dato partibus 776, quarum 11655 augment angulum à Perihelio 1°. 31'. 4'', & Logarithmum pro distantia à Sole differentia 1760: Adjectâ itaq; angulo 16°. 57'. 55'', & Logarithmo 0,009396, in Tabulâ isti medio motui competentibus, parte proportionali respectivè, fit angulus veri Motus à Perihelio 17°. 3'. 58'', & Log. pro distantia à Sole 0,009513, ipsius vero distantix Log. 9,774809. Ad locum Perihelii nempe $\sphericalangle$ 1°. 36' adde 17°. 3'. 58'', & habebitur locus Cometæ in Orbe $\sphericalangle$ 18°. 39'. 58'', ad Eclipticam vero reductus $\sphericalangle$ 18°. 33'. 36'', cum Latitudine Heliocentricâ 17°. 41'. 14'' Boreâ; unde Distantia curtata Log. 9,753779. Eodem momento Sol habuit $\sphericalangle$ 17°. 20'. 54'', ac Log. distantix ejus à Teriâ 0,002395. Ex his datis elicitur Locus Cometæ Geocentricus $\sphericalangle$ 15°. 35'. 58'' cum Lat. Boreâ 17°. 24'. 11''; peccans in Longitudine 1'. 16'', in Latitudine vero non nisi 0'. 45''.

Ad hunc modum Theoriam jam expositam cum omnibus Dⁿⁱ *Flamstedii* observatis conferendo, ubiq; intra differentias merito contemnendas consensum Coeli cum motu hoc Elliptico expertus sum; uti patet ex subiectâ Tabellâ.

MDC LXXXII.			Cometæ Long.			Lat. Bor.			Cometæ Long.			Lat. Bor.			Differen.			Differen.		
Temp. Appar.			Observat.			Observat.			Comput.			Comput.			Longit.			Latit.		
D.	H.		°	'	''	°	'	''	°	'	''	°	'	''		'	''		'	''
Aug. 19	16	38	$\sphericalangle$ 18	15	5	25	49	19	$\sphericalangle$ 18	14	19	25	48	33	—	0	46	—	0	46
20	15	38	24	47	55	26	11	50	24	48	5	26	11	40	+	0	10	—	0	10
21	8	21	29	37	51	26	15	15	29	39	3	26	18	3	+	1	12	+	2	48
21	16	19	$\sphericalangle$ 1	58	0				$\sphericalangle$ 1	58	23				+	0	23			
22	8	8	6	30	8	26	4	35	6	32	10	26	6	37	+	2	2	+	2	2
29	8	20	$\sphericalangle$ 12	35	55	18	37	27	$\sphericalangle$ 12	38	19	18	35	3	+	2	24	—	2	24
30	7	45	15	34	42	17	24	56	15	35	58	17	24	11	+	1	16	—	0	45
Aug. 31	8	21	18	16	20				18	17	30				+	1	10			
Sept. 1	7	33	20	28	12	15	11	37	20	29	31	15	11	23	+	1	19	—	0	14
4	7	22	25	39	36	12	22	29	25	39	34	12	22	42	—	0	2	+	0	13
5	7	32	26	58	20	11	31	26	26	57	45	11	33	34	—	0	35	+	2	8
8	7	16	$\sphericalangle$ 29	56	0	9	25	31	$\sphericalangle$ 29	54	40	9	26	26	—	1	20	+	0	55
9	7	26	$\sphericalangle$ 0	41	36	8	49	2	$\sphericalangle$ 0	39	39	8	49	0	—	1	57	—	0	2

Neque

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Neque ulteriore limâ Orbem hujus Cometæ expoliendum esse censui, cum differentia quas videmus non totæ Numerorum nostrorum erroribus tribuenda sint; sed partim ipsis Observationibus, partim assumptis Fixarum locis nondum absolutè perfectis, præcipue vero Refractionibus aëreis prope Horizontem variis, quibus toto apparitionis suæ tempore implicabatur Cometa, vix unquam visus 12 gradibus altior. Sed & differentia istæ haudquaquam majores sunt quam quæ in Theoriis Planetarum primariorum, per tot secula ab Astronomis excultis, vulgo experimur. Utinam Jovis & Saturni Motus intra tam arctos limites coercere liceret.

Stabilito itaq; hoc Orbe, expendamus jam cursum Cometæ quem Anno 1607 se observasse scribunt *Keplerus* & *Longomontanus*, Viri sane in Astronomicis gravissimi, sed qui descriptione nimis laxâ, ac nostræ disquisitioni haud satis aptâ, contenti sunt: Qualia autem reliquere Observata hic habes.

Anno 1607, Sept. 16. St. Vet. *Keplerus* *Pragæ* circa horam nonam, vel *Londini* octavam, Cometam primâ vice vidit sub *Ursa majore*, & quantum ex situ inter Fixas remotiores potuit, locum ejus æstimavit Ω 18°. 30', cum Lat. Bor. 35°. Sequenti mane hora tertiâ, distantia à Genu *Ursæ posteriori* ($\downarrow$ *Bayero*) paulo minor erat distantia duarum in *Pede viciniore* (λ & μ *Ursæ*) eique ad oculum parallela, quasi in lineâ ex Genu *Ursæ* in *Solitariam Colli* (ν *Bayero*): Rectificatis Stellarum locis (quæ vitiosè describuntur, nescio quo casu, in *Abaco Tychonico*) fit visus Cometæ locus Ω 21°. 49'. Lat. 36°. 12' Boreâ. Horâ nempe *Londini* æquat. 13^h. 51'.

Sept. 18. 8^h. 30' *Pragæ*, *Londini* 7^h. 20' Temp. æquat. Visus est Cometa stare infra Stellulam informem sociam *Informis magnæ inter Caudas Ursæ & Leonis*, quæ tunc habuit $\mathbb{M}$ 12°. 18', cum Lat. 40°. 33', à quâ aberat diametro Lunæ, in lineâ quæ tendit secundum *Ultimam Caudæ Ursæ* per *Manum Bootis*. Cometam reponunt hæc Observata in $\mathbb{M}$ 12°. 2', cum Latitudine 40 graduum; cum nempe distantia nudo oculo æstimatæ Lunæ diametro æquales, sint saltem 40 Min.

Sept. 21. 7^h. 30' *Haphniæ*, hoc est *Londini* 6^h. 30' Temp. æquat. *Longomontanus*, per Sextantem quinque, ut ait, in radio Cubitorum, invenit Cometam distare à *Mediâ Caudæ Ursæ Majoris* 30°. 59', & circa idem tempus à *Lucidâ Coronæ* 16°. 45', Observationibus reiteratis. Hinc verificatis è *Catalogo Britannico* Fixarum locis, oritur Cometæ Long. $\sqcap$ 16°. 48', cum Lat. Boreâ 37°. 12'. Circa idem tempus observavit *Keplerus*, Tyrone usus socio, Cometam distare ab *Arcturo* 6°. 5', in recta ducente ab *Arcturo* in *precedentem Humerum Bootis* (γ *Bayero*) unde Cometæ locus saltem $\sqcap$ 17°. 0'.

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Sept. 25. Post horam primam ab Occasu Solis Praga 6^h. 48' Londini Temp. æquat. 5^h. 36'. videbatur Cometa exiguo superior linea ex *Arcturo* in *Claram in Collo Serpentis* (α) distans ab eadem 4°. 30'. Horâ vero secundâ ab Occasu Solis, sive 7^h. 37' Praga, satis apparebat superasse lineam ex *Radice Colli Serpentis* (δ) in *Eductionem Colli ejus* (β) ductam. Prima Observatio reponit Cometam in $\mathbb{M}$ 12°. 0'; altera ad horam secundam in $\mathbb{M}$ 12°. 30' circiter.

Sept. 27. Cometa incidit in lineam ex *Secunda in Collo Serpentis* (δ) per *Claram Colli* ductam, stans sub ea quæ sequitur *Claram* (ϵ) Diametro Lunæ, vel paulo plus; & linea ex Cometâ per illam suam vicinam incidebat medio inter *Lucidam Coronæ* & *Humerum Herculis* (β). Hæc signant locum Cometæ in $\mathbb{M}$ 18°. 50', cum Lat. 23°. 20' Bor. Keplerus horam non habet, sed adultâ nocte factam Observationem credibile est, ob visas Stellas minores. Pone 6^h. 30' Londini Temp. æquat.

Octob. 1. 6^h $\frac{1}{4}$ Malmogia in Scania vidit Longomontanus Cometam distantem à *Boreâ Manus Serpentarii* quoad visum vix gradûs dimidio; erat autem tunc in recta cum *Arcturo* & *Australi in eadem Manu*: Circa idem tempus, ait Keplerus, exiguo erat inferior lineâ *duarum Manûs*, distans à proximâ tertiâ parte distantiae illarum. Uterq; Observator, nescio quo fato, perperam deduxere locum Cometæ ex his suis Observationibus, quem alter habet $\mathbb{M}$ 25°. 50', cum Lat. 17°. 35'; alter $\mathbb{M}$ 26°. 30', cum Lat. 17°. 40', immuni discrepantiâ, cum in æstimatâ distantia & situ Cometæ pene conveniant. Si loco diametri Lunæ ponantur 40', (ut nudo oculo plerumq; videtur) ac supponatur Cometa in linea recta cum Stellis *Manûs* constitutus, foret 23 Min. Borealis proximâ, ac 34 Min. Occidentalis, hoc est in $\mathbb{M}$ 26°. 16', cum Lat. Bor. 17°. 40'. Sed hanc rectam præcedebat sensibilibiter consensu utriusque, adeoq; erat proximè in $\mathbb{M}$ 26°. 0'; id quod satis accurate reponit Cometam in lineâ rectâ cum *Arcturo* & *Australi in Manû*, ut à Longomontano notatum est.

Octob. 2. Uterq; Observator iisdem in Urbibus Cometam contulerunt cum prædictis Stellis in *Manû*. Longomontanus Horâ 6^h $\frac{1}{4}$ vidit eum in cuspide obtusi Isoscelis Trianguli cum dictis Stellis, propius tamen ad earum Boream inclinabat. Conficiebat autem, quoad filarem extensionem, rectam lineam cum *Penultima ad ortum in Coronâ* (ϵ) & *Boreâ in Manu*; itemque aliam rectam cum *Australi Manûs* & inferiore capite $\mathbb{M}$ (credo $\mathbb{V}$). Keplerus circa idem tempus (horam enim non notat) vidit Cometam inter *duas Manûs* medium, infra tamen lineam illarum, paulo altior linea ex ima illarum in *Spi-*

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ram *Serpentis* vicinam (μ *Serpentis* *Bayero*) Omnibus perpenſis fit Locus Cometæ $\mathbb{M}$ $27^{\circ}. 5'$, cum Lat. Boreâ $16^{\circ}. 40'$. Londini $5^h. 12'$ Temp. æquat.

Octob. 5. $8^h. 30'$ *Pragæ*, instrumentulo quodam è *Tychonicis*, observavit *Keplerus* distantiam Cometæ à *Genu Ophiuchi* (η) $14^{\circ}. 14'$, & ab *Humero præcedente Herculis* (β) $28^{\circ}. 56'$. Hinc fit Cometa in $\mathbb{M}$ $29^{\circ}. 47'$, cum Lat. Boreâ $14^{\circ}. 2'\frac{1}{2}$.

Octob. 6. Eadem Horâ, distabat à *Genu Ophiuchi* $13^{\circ}. 22'$, & ab *Humero Herculis* $29^{\circ}. 27'$; unde Longitudo $\mathbb{I}$ $0^{\circ}. 33'\frac{1}{2}$, & Lat. $13^{\circ}. 36'\frac{1}{2}$.

Octob. 9. 8^h . Hæ distantia erant $11^{\circ}. 22'$; & $31^{\circ}. 19'$; ac proinde locus Cometæ $\mathbb{I}$ $2^{\circ}. 1'$, cum Lat. Boreâ $11^{\circ}. 56'$.

Octob. 12. $6^h. 30'$ *Haphniæ*, Consensu utriusq; Observatoris, erat Cometæ locus $\mathbb{I}$ $1^{\circ}. 50'$, cum Lat. $9^{\circ}. 45'$ Bor. Sed cum hoc è filaribus tantum extensionibus per *Stellas remotiores* conclusum sit, quæ observandi methodus in minimis vix satis fida, nollem Cometæ Motum apparentem jam tum Retrogradum factum hinc adstruere.

Octob. 16. $6^h. 15'$ *Pragæ*, *Keplerus* ultimâ vice Cometam vidit, idq; raptim inter nubes: Stabat, ait, humilis admodum, in Verticali qui circiter dimidiâ *Lunæ* diametro occidentalior erat ipso *Genu* (ζ) *Ophiuchi*, tantum infra *Genu* ut quasi quatuor, certe plus quam tres, distantia duarum in *Manu* interesse viderentur. De hac observatione vide *Longomontanum*, ubi *Keplerum* redarguit nimis securè Cometam ad Latitudinem $6^{\circ}\frac{1}{2}$ gr. deprimentem; cum ex dicto situ illum non minorem habuisse Longitudinem quam $\mathbb{I}$ $2^{\circ}. 10'$, nec Latitudinem 8 gr. minorem computat.

Hæc observata è *Kepleri* libello de *Cometis* anno 1619 *Augustæ Vindellicorum* edito, & ex *Appendice Astronomiæ Danicæ Longomontani* desumpta (quæ tamen optassem majori cum studio descripta, præsertim juxta finem apparitionis) cursum hujus Cometæ mediocriter quidem designant; satis evidenter vero commonstrant unum eundemq; fuisse cum eo Anni 1682, eodem plane argumento quo *Martem*, diutius sub *Solis* radiis aliquando latitantem, eundem esse Planetam novimus.

Etenim uterq; Cometa Retrogradus, & idem specie Orbis utriq; communis vix majori *Nodorum* & *Perihelii* motu diversus reperitur, quam qui post tot annos in *Planetarum superiorum Orbibus* agnoscitur. Cum autem inter annos 1531 & 1607 intersint Anni 76, *Semiaxem* ejus paulo majorem feci, nempe qui sit ad *mediam Solis distantiam* ut $76\frac{2}{3}$ sive 17,9422 ad 1; distantiamq; *Periheliam* proportionaliter auxi, id etiam postulantibus *Observationibus*, ut sit 0,58507, cujus *Logarithmus* 9,767207. Nodum autem habuit

Ascen-

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Ascendentem ad γ $17^{\circ}. 48'. 40''$, cum Inclinatione Plani ad Eclipticam $17^{\circ}. 20'$; Perihelion vero in ϖ $1^{\circ}. 3'. 40''$; & Temp. æquat. Perihelii *Octob.* $16^{\circ}. 21^h. 44'$ *Londini*. Motus etiam medius ejus diurnus fit pars septuagesima sexta diurni Solis, sive 0,000226344, cujus Logarithmus 6,354769.

His positis Elementis, eâdem omnino calculi methodo quâ in præcedentibus usus sum, hujus Cometæ Observata qualia qualia cum Numeris Tabulæ nostræ contuli; ac licet in aliquibus ex ultimis diversitas paulo nimia reperiat, hoc maximâ ex parte Observationibus ipsis parum sibi congruis tribuendum esse, facile perspiciet Candidus Lector.

MDC VII.			Cometæ Long.				Lat. Bor.				Cometæ Long.				Lat. Bor.				Differen.				Differen.			
Temp. Æquat.			Observat.				Observat.				Comput.				Comput.				Longit.				Latit.			
D. H.			° ' "				° ' "				° ' "				° ' "				° ' "				° ' "			
Sept.	16	13 51	♏	21	49	0	36	12	0	♏	21	55	56	36	20	4	+	6	56	+	8	4				
	18	7 20	♏	12	2	0	40	0	0	♏	12	3	15	39	50	0	+	1	15	-	10	0				
	21	6 30	♏	16	48	0	37	12	0	♏	16	45	13	37	11	2	-	2	47	-	0	58				
	25	5 36	♏	12	12	0				♏	12	8	47				-	3	13							
	27	6 30		18	50	0	23	20	0		18	44	40	23	16	0	-	5	20	-	4	0				
Oct.	1	5 25		26	0	0	17	40	0		25	58	40	17	45	46	-	1	20	+	5	46				
	2	5 12		27	5	0	16	40	0		27	7	12	16	44	0	+	2	12	+	4	0				
	5	7 15	♏	29	47	0	14	2	20	♏	29	39	25	14	5	35	-	7	35	+	3	15				
	6	7 15	♏	0	33	30	13	36	30	♏	0	14	0	13	22	55	-	19	30	-	13	35				
	9	6 45		2	0	50	11	56	0		1	25	7	11	33	48	-	34	43	-	22	12				
	12	5 25		1	50	0	9	45	0		2	1	17	10	4	36	+	11	17	+	19	36				
	16	5 0	♏	2	10	0	8	0	0	♏	2	14	32	8	24	10	+	4	32	+	24	10				

Hic obiter notandum occurrit, Nodos hujus Cometæ tres gradus præcessisse eos Cometæ anni 1682, motu secundum seriem signorum progressos; dum Perihelion $32'. 20''$ tantum promotum est. Sed hoc annorum spatio præcessio Æquinoctiorum fit $1^{\circ}. 2'. 30''$; unde respectu Fixarum, recessit Aphelion dimidio gradu, procedentibus interea Nodis $1^{\circ}. 57'$. In Planetis autem progrediuntur Aphelia ac Nodi recedunt, ob Vires Corporum cœlestium Centripetas, manifesto sese Solis Viribus immiscentes, easq; interturbantes, quæ alias accuratissimè in subduplicatâ ratione distantiarum à centro ejus reperirentur; unde corpora circa centrum illud revoluta, in Planis quiescentibus & invariatis, gyros Ellipticos in sese redeuntés perpetuo describerent, per *Prop.* 14. *Lib. III. Princip. Natur. Philosophia.* Verum hic Cometa motu Retrogrado fertur; unde ob easdem causas Aphelion ejus regredi, Nodiq; promoveri debent in Cœlo immobili, propter quas Planetarum Nodi regrediuntur & Aphelia procedunt.

Objiciat

De Motu Cometarum in Orbibus Ellipticis.

Objiciat fortasse nonnullus Inclinationum & Periodorum diversitatem, eâ quæ in revolutionibus ejusdem Planetæ observatur multo majorem; cum nempe una Periodus alteram plusquam spatio annuo excedat, & Inclinatione Cometæ Anni 1682 totis viginti duobus minutis primis superet Inclinationem motui Cometæ anni 1607 competentem. Perpendas tamen, obsecro, ea quæ ad finem Tabularum nostrarum *Saturni* monuimus, ubi unam istius Planetæ Periodum aliquando tredecim diebus aliâ diuturniorem fuisse monstravimus; idq; evidenter fieri Vi Gravitatis versus *Jovis* centrum tendentis, quæ quidem Vis in paribus distantis millesima fere pars est Vis Solis ipsius, quâ in Orbibus suis retinentur Planetæ. Computo autem accuratius instituto, Vires *Jovis* in *Saturnum*, ex gr. in Conjunctione ut vocant magnâ, *Januarii* 26^o anno 1683 factâ, inveniuntur ad Vim Solis in eundem *Saturnum* ut 1 ad 186; Summa igitur Virium est ad Vim Solis ut 187 ad 186. Sed ad easdem distantias à centro, revolventium in circulo Tempora Periodica sunt in subduplicata ratione Virium quibus urgentur: Proinde auctâ Gravitate parte sui 186^{ma}, abbreviaretur Periodus parte 374^{ta} circiter, hoc est toto Mense in *Saturno*. Quanto magis hujusmodi erroribus obnoxius erit hic Cometa, qui quatuor pene vicibus altius excurrit *Saturno*, cujusq; Velocitas, parte sui 120^{ma} minore auctâ, poterit Orbem Ellipticum in Parabolicum immutare?

Accidit autem, currente æstate anni 1681, Cometam anno sequente visum, in descensu suo versus Solem, *Jovi* ita conjunctum fuisse, & per plures menses eidem adeo vicinum, ut toto illo tempore parte quasi quinquagesimâ Virium quæ Solem petebant, versus centrum *Jovis* simul urgeretur: Unde, juxta Gravitatis Theoriam, arcus Orbis Elliptici, quem absente *Jove* Cometa describere debuisset, jam flexu Hyperboliformi *Jovem* respiciente intortus, speciem Curvæ admodum compositæ atq; hætenus *Geometris* intractabilis indueret; in qua Corporis moti Velocitas & directio, ab iis quæ alias in Ellipsi fierent, pro ratione causæ, diversæ provenirent.

Hinc ratio reddi potest immutatæ Inclinationis: Nam cum Cometa in hoc transitu *Jovem* habuerit Boream versus pene normaliter in viam ejus erectum, incurvari debuit ista Orbis portio in eandem plagam; ac proinde Tangentibus ejus majoribus cum Angulis ad Planum Eclipticæ inclinatis, angulus Inclinationis Plani ipsius augetur necessario. Præterea Cometa diuturniori morâ in viciniâ *Jovis* hærens, dum è partibus à Sole remotioribus tardius eum accessit, ac junctis utriusq; centri viribus urgeretur, plus Velocitatis ascititiæ acquisivisse debuit, quam in recessu ejus à *Jove* citatiori motu ac breviori tempore factò, in contrarias partes agentibus viribus, amittere

R r r r

potuit:

De Motu Cometarum in Orbibus Ellipticis.

potuit: Proinde auctâ hoc excessû velocitate propriâ Cometæ, probabile fit reditum ejus non nisi post Periodum longiorem 76 & amplius annorum, circa finem anni 1758 vel initium proximi, futurum. Sed hæc levi tantum calamo à nobis tacta, Posterorum studio penitus excutienda permittimus, postquam rei veritas ex eventu comprobata fuerit.

Quod Cometa anni 1531 ab *Apiano* observatus idem fuerit cum jam descripto satis patet ex Periodo, ex motu ejus inter Solem & Terram Retrogrado, ex situ Perihelii & Nodorum & ex Inclinatione à prioribus non multum diversis: Quæ tamen omnia si quis accuratè definire fusciperet, frustra neam certè navaret operam, propter Observationes nimis imperfectas, rudi Minervâ & instrumento parvo Azimuthali captas, & ad ostendendum Caudæ Cometicæ ascensum in partes à Sole averfas unicè destinatas.

Nequis tamen causetur quicquam huc spectans à nobis omissum, *Apiani* ipsius opus *Astronomicon Casareum*, *Carolo V. Cesari* dicatum, & apud nos tandem ægrè inventum consului, atq; inde sequentia non alibi edita deprompsi.

Anno 1531 *Ingolstadii* ad *Danubium* (sub Latitudine $48^{\circ} 40'$, & Longitudine $11^{\circ} \frac{1}{2}$ grad. vel 46 Min. Temp. à *Londino* ad ortum) *Augusti* 13^o. vesperti, primâ vice observavit Cometam *Apianus* Corum versus: Ac Stellâ clarâ *Arcturi* ipsam Occidentis plagam occupante, vel, ut aiunt, in primo Verticali constitutâ, Cometa altus $7^{\circ} 56'$ erat $49^{\circ} 26'$ Occidente Boreali. Posteriâ Nocte *Aug.* 14^o, revoluta Cœlo, erat altitudo Cometæ $8^{\circ} 29'$, jam $45^{\circ} 22'$ versus Boream *Aug.* 15^o in eodem Cœli situ, Cometa $9^{\circ} 00'$ altus Boreali erat $41^{\circ} 22'$. *Aug.* 16^o. altus $9^{\circ} 43'$ erat Bor. $35^{\circ} 13'$ tantum. *Aug.* 17^o, in Azimuthâ $30^{\circ} 46'$ ab Occidente, altus erat $10^{\circ} 14'$. *Aug.* 18^o, altus $10^{\circ} 39'$, ab Occidente $24^{\circ} 42'$. Deinde, post triduum nubibus obductum, *Aug.* 22, in eodem Sphæræ stellatæ situ, Cometa altus $11^{\circ} 25'$ erat $7^{\circ} 34'$ ab Occidente versus Boream: Deniq; *Aug.* 23^o *Arcturo* in Occidente sito, eo Borealiior erat Cometa non nisi $3^{\circ} 50'$, in altitudine $11^{\circ} 26'$.

Supponit autem Observator, pro Astronomiâ suæ ætatis, *Arcturum* tunc habuisse $\sphericalangle 16^{\circ} 59'$, cum Lat. $31^{\circ} 30'$ Bor. perperam pro $\sphericalangle 17^{\circ} 41'$, cum Lat. $30^{\circ} 57'$, uti ex certioribus observatis constat. Et substituto hoc ejus loco, sit Ascensio Recta Medii Cœli, *Arcturo Ingolstadii* Occidentem occupante, $278^{\circ} 10'$. Hinc altitudinibus à Refractione purgatis, calculo satis superq; accurato, proveniunt loca Cometæ ut sequitur.

De Motu Cometarum in Orbibus Ellipticis.

M D XXXI. Ingolst. Temp. App.			Cometæ Asc. Recta.			Cometæ Decl. Bor.			Cometæ Long. Observat.			Lat. Bor. Observat.			Longit. Apiano.			Lat. Bor. Apiano.		
D.	H.		°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
Aug. 13	8	26	151	45	45	36	49	25	♌	20	16	0	23	30	10	♌	19	15	23	15
14	8	22	156	17	20	35	3	50		24	41	30	23	18	45		23	39	23	2
15	8	19	160	32	50	33	11	50	♌	29	1	0	23	1	30		24	29	22	0
16	8	15	166	43	20	30	4	30	♍	5	36	15	22	21	40	♍	4	32	22	1
17	8	11	170	58	40	27	42	25		10	19	40	21	47	0		9	14	21	25
18	8	7	176	19	30	24	8	50	♍	16	37	0	20	36	15	♍	15	30	20	12
22	7	54	190	6	30	13	27	10	♎	3	49	0	16	20	40	♎	1	23	16	32
23	7	50	192	53	30	11	1	20	♎	7	25	30	15	13	40		2	51	14	31

Si hæc loca inter se conferantur, statim manifesta fit nimia eorum discrepantia, vitio Instrumenti quo observabantur proculdubio tribuenda. Sed & in deducendis locis ex Observatione tertiâ & duabus ultimis, graviter ab ipso *Apiano* erratum invenies. Etiam si vero nihil certi & accurati ex tum incertis Datis elici poterit, abunde tamen valent ad ostendendum hunc Cometam cursum tenuisse cursui ejus qui anno 1682 fuit perquam similem, ac si Latitudini ejus tres gradus adjicias, pene eundem.

Supervacuum esset Numeros nostros cum his conferre; cum prorsus impossibile sit computo quovis regulari tam irregularia & inter se pugnantia conciliari. Si vero ponatur Periodus 75 annorum, atq; adeo Semiaxis major Ellipseos 17,7845; Distantia Perihelia 0,57993; Nodus Ascendens $\oslash$ 15°. 30'; Inclination 17°. 00', & Perihelion $\approx$ 1°. 12'; Tempus vero Perihelii Anno 1531 *Augusti* 25^d. 19^h. 00'; ac medius Motus diurnus pars septuagesima quinta diurni Solis, sive 0,000229362 cujus Log. 6,360522; habebitur, ope ejusdem Tabulæ, motus hujus Cometæ supputatio, plerumq; Observationibus magis congrua quam sunt ipsæ Observationes inter se.

Vides itaq; in his tribus consensum Elementorum omnium, miraculi fane loco habendum si fuerint tres diversi Cometæ; vel si non fuerint ejusdem in Ellipsi revoluti tres ad Solem Terramq; accessus diversi. Quocirca si secundum prædicta nostra redierit iterum circa annum 1758, hoc primum ab Homine *Anglo* inventum fuisse non inficiabitur æqua Posteritas.

Atq; hic est Cometarum quasi *Mercurius*, arctiore Orbe ac brevior Periodo Solem ambiens, dum cæteri omnes latius expatiantur, & post Revolutiones longissimas & plus quam seculares, imo plurium seculorum, per exigua tantum intervalla hominum conspectui se produnt; dum scilicet à vi-

De Motu Cometarum in Orbibus Ellipticis.

cino Sole illustrati fortiore lumine splendent, sensibilesq; exhalant Caudas, quæ non nisi Vapores tenuissimi sunt è materiâ Cometicâ vi caloris agitâtâ elicti, & in æthere tantum non vacuo magnâ cum velocitate sursum protrusi. Sed de hac re Physicâ audi Celeberrimum *NEUTONUM*, sub finem *Lib. III. Principiorum*, pro more suo demonstrativè disputantem.

Hinc fit, ut pari evidentiâ ac in hoc nostro anni 1682, non constet rediisse aliquem alium Cometam. Verum si quid argumenti ex æqualitate Periodorum & ex Phænomenis simularibus peti possit, mirus ille Cometa qui anno 1680 fulsit, unus idemq; fuit qui anno 1106, regnante apud *Anglos* Rege *Henrico I*, è Solaribus radiis primum emerfit “ *Die Veneris Februarii 16°* “ Vesper, & per longum postea tempus singulis diebus vesperi conspectus est. “ Stella apparuit in Norozephyro, quæ exigua est visa & obscura, verum “ radius qui ab ea profluxit admodum clarus esse atq; ingens radius putabatur, versus Euraquilonem fulgens”, ut habetur in *Chronico Saxonico*, à Teste oculari ut videtur conscripto. Hæc autem descriptio satis quadrat cum eâ Cometæ anni 1680, tam ratione prolixæ caudæ, quam situs respectu Solis.

Alius etiam Cometa similis, juxta Consulatam *Lampadii & Orestis* & annum *Christi 531*, Imperante *Justiniano*, vesperi visus est; de quo *Malela* Author *Chronici Antiocheni*, fortassis etiam Testis ocularis, hæc scribit. “ Stella “ ingens & tremenda in Occidente comparuit, radium album sursum emit- “ tens, quam quod fulguris emissionem præ se ferebat *Lampadian* nonnulli “ vocitabant. Per Dies autem XX fulsit”. Optassem quidem Historicum anni tempestatem qua hæc conspecta sunt prodidisse; manifestum tamen est intervallum annorum inter hunc & illum anno 1106 visum, proximè æquale fuisse intervallo inter annos 1106 & 1681, nempe 575 annorum circiter.

Deductâ autem aliâ Periodo huic æquali, deveniemus ad annum ante *Christum* natum quadragesimum quartum, quo post occisum *Julium Cæsarem*, emerfit Cometa maxime insignis, ab Historicis ejus temporis pene omnibus celebratus, & à *Plinio*, *Nat. Hist.* Lib. II. Cap. 24; ubi habentur verba ipsius *Augusti Cæsaris* de hac re: Horum ope ad ipsissimum tempus, situmq; Phænomeni in Cœlis perducimur; quapropter ea hic recitari non pigebit. “ In ipsis Ludorum meorum diebus, Sydus crinitum per septem dies, in “ regione Cœli quæ sub Septentrionibus, est conspectum. Id oriebatur circa “ undecimam horam diei, clarumq; & omnibus Terris conspicuum fuit”. Jam Ludos hos suos dedicavit *Augustus Veneri Genetrici* (nam à Deâ *Venere* prognatos se jactavêre *Cæsares*) & à Natalibus suis, die scil. 23° *Septembris* inchoatos per septiduum continuavit; ut ex fragmento antiqui *Calendarii*

Romani

De Motu Cometarum in Orbibus Ellipticis.

Romani apud Gruterum, pag. 135 Nov. Edit. colligere licet. Per hos autem septem dies comparuit Cometa teste *Cæsare*: Nihil tamen obstat quin etiam ante & post dies illos conspicuus fuerit. Quod vero dicatur visum fuisse Cometam *sub Septentrionibus*, minime intelligendum est quasi in Boreâ Cœli parte sub Polo apparuerit, sed sub *septem Trionibus*, i. e. infra Stellas lucidiores *Ursæ Majoris*. Horâ autem undecimâ diei ortum fuisse nullo modo concipi potest; quapropter loco *diei* legatur *noctis*, vel omissâ eâ voce, uti legitur apud *Suetonium*: Sole enim prope æquinoctium autumnale tum constituto, hora undecima *Romana*, quâ ortus Cometa dicitur, cœpit à quartâ matutinâ nostri computi; ita ut inter quartam & quintam, quasi sesquihorâ ante Solis exortum oriri judicabatur: Præcedebat igitur Solem viginti circiter gradus, quod de principio apparitionis, vel saltem septidui dicti, intelligi debet. Quo tempore vero sub septem Trionibus fulsit, multo citius oriebatur, ac latitudinem habuit Borealem sat magnam, motu Retrogrado è Signo *Virginis* in *Cancrum* latus; emenso scilicet spatio inter *Leonem* & *Ursam* intermedio.

Jam si retineatur situs Orbis Cometæ anni 1680 respectu Fixarum, ac ponatur Perihelion ejus anno ante Christum natum 44^{to}, circa *Septembris* diem 18^{vum}. Calculo utcunque instituto, statim patebit cursum Cometæ, in ascensu ejus à Sole, ubi maximam projecit Caudam, *clarumq; erat & omnibus Terris conspicuum sydus*, cursui hujus ab *Augusto Cæsare* descripti fatis congruere. Proinde haudquaquam absurdum erit si Cometam à *Cæsare* visum, absolutis tribus revolutionibus, anno 1680 nobis denuò affulisse credamus; præsertim cum ad æqualia temporis intervalla, annis sc. *Christi* 531 & 1106, similes quoq; Cometæ apparuerint.

Ponamus itaq; Periodum ejus 575 annorum esse proximè. Unde fiet Semiaxis major Ellipseos 575⁺ sive 69,14785, qualium media Terræ à Sole distantia sit 1. Earundem vero partium sit distantia perihelia 0,006175, qualem invenimus observationibus maxime congruam, atq; adeo Semiaxis Orbis conjugatus 0,92410; vel posito semiaxe majore = 1, fiet distantia Perihelia 0,000089301 cujus Logarithmus 5,950858; & Semiaxis minor 0,0133641 ejusq; Logarithmus 8,125939: His jactis fundamentis, Tabulam sequentem concinnavi, ejusdem pene formæ cum præcedente: Cum vero ob viciniam Solis non conspici poterit hic Cometa nisi quarto die à Perihelio, inchoatur Tabula à gradu quinto Anomalix Eccentri: Anguli etiam numerantur ab Aphelio, & Logarithmi sunt ipsarum rationum quas habent veræ Cometæ à Sole distantix ad mediam Solis à Terrâ distantiam. Porro ad decimas graduum computata est in priori parte, ne secundis differentiis ad debitam interpolationem opus sit.

T A B U L A

TABULA MOTUS COMETÆ

ANNIS MDCLXXX & MDCLXXXI VISI.

<i>Anom. Eccentri.</i>	<i>Medius Motus Cometæ.</i>	<i>Diff. med. Motus.</i>	<i>Angulus ab Aphelio.</i>	<i>Diff. An- gulorum.</i>	<i>Distantiæ à Sole Logar.</i>	<i>Differen- tia Logar.</i>
°			° ' "	' "		
5 0	0,00011850		17 24 12		9,430205	
		693		20 12		16801
6	0,00012543		17 4 0	19 26	9,447007	16490
12	0,00013263	720	16 44 34	18 44	9,463497	16190
18	0,00014011	747	16 25 50	18 2	9,479687	15898
24	0,00014787	776	16 7 48	17 24	9,495585	15617
5 30	0,00015591	804	15 50 24	16 47	9,511202	15346
		834				
36	0,00016425	864	15 33 37	16 13	9,526548	15084
42	0,00017289	893	15 17 24	15 39	9,541632	14830
48	0,00018182	925	15 1 45	15 9	9,556462	14585
54	0,00019107	955	14 46 36	14 38	9,571047	14347
6 0	0,00020062	988	14 31 58	14 11	9,585394	14118
		1020				
6	0,00021050		14 17 47	13 43	9,599512	13894
12	0,00022070	1053	14 4 4	13 17	9,613406	13678
18	0,00023123	1086	13 50 47	12 54	9,627084	13469
24	0,00024209	1121	13 37 53	12 29	9,640553	13265
6 30	0,00025330	1154	13 25 24	12 7	9,653818	13068
		1190				
36	0,00026484		13 13 17	11 46	9,666886	12877
42	0,00027674	1225	13 1 31	11 25	9,679763	12690
48	0,00028899	1262	12 50 6	11 6	9,692453	12509
54	0,00030161	1298	12 39 0	10 47	9,704962	12333
7 0	0,00031459	1335	12 28 13	10 39	9,717295	12160
		1372				
6	0,00032794		12 17 44	10 12	9,729455	11995
12	0,00034166	1411	12 7 32	9 55	9,741450	11833
18	0,00035577	1450	11 57 37	9 39	9,753283	11674
24	0,00037027	1489	11 47 58	9 24	9,764957	11521
7 30	0,00038516	1528	11 38 34	9 10	9,776478	11371
		1569				
36	0,00040044		11 29 24	8 55	9,787849	11224
42	0,00041613	1610	11 20 29	8 42	9,799073	11082
48	0,00043223	1651	11 11 47	8 28	9,810156	10943
54	0,00044874	1693	11 3 19	8 16	9,821099	10808
8 0	0,00046567	1735	10 55 3	8 4	9,831907	10675
		1778				
6	0,00048302		10 46 59	7 52	9,842583	10546
12	0,00050080	1822	10 39 7	7 41	9,853129	10419
18	0,00051902	1865	10 31 26	7 30	9,863548	10297
24	0,00053767	1910	10 23 56	7 20	9,873845	10178
8 30	0,00055677		10 16 36		9,884023	

TABULA MOTUS COMETÆ

ANNIS MDCLXXX & MDCLXXXI VISI.

<i>Anom. Eccentri</i>	<i>Medius Motus Cometæ.</i>	<i>Diff. med. Motus.</i>	<i>Angulus ab Aphelio.</i>	<i>Diff. An- gularum.</i>	<i>Distantia à Sole Logar.</i>	<i>Differen- tia Logar.</i>
0						
8 30	0,00055677		10 16 36		9,884023	
		1955		7 9		10060
36	0,00057632	2001	10 9 27	7 0	9,894083	9944
42	0,00059633	2047	10 2 27	6 51	9,904027	9832
48	0,00061680	2093	9 55 36	6 41	9,913859	9723
54	0,00063773	2141	9 48 55	6 32	9,923582	9615
9 0	0,00065914		9 42 23		9,933197	
		4424		12 39		18916
12	0,00070338	4619	9 29 44	12 8	9,952113	18513
24	0,00074957	4818	9 17 36	11 37	9,970626	18127
36	0,00079775	5021	9 5 59	11 9	9,988753	17756
48	0,00084797	5228	8 54 50	10 42	0,006509	17399
10 0	0,00090025		8 44 8		0,023908	
		5440		10 18		17058
12	0,00095465	5657	8 33 50	9 54	0,040966	16729
24	0,00101122	5876	8 23 56	9 31	0,057695	16410
36	0,00106998	6100	8 14 25	9 11	0,074105	16107
48	0,00113098	6328	8 5 14	8 51	0,090212	15812
11 0	0,00119426		7 56 23		0,106024	
		6561		8 32		15526
12	0,00125987	6798	7 47 51	8 14	0,121550	15253
24	0,00132785	7038	7 39 37	7 57	0,136803	14990
36	0,00139823	7283	7 31 40	7 42	0,151793	14732
48	0,00147106	7532	7 23 58	7 25	0,166525	14486
12 0	0,00154638		7 16 33		0,181011	
		7786		7 12		14248
12	0,00162424	8043	7 9 21	6 58	0,195259	14013
24	0,00170467	8305	7 2 23	6 44	0,209272	13791
36	0,00178772	8571	6 55 39	6 32	0,223063	13572
48	0,00187343	8841	6 49 7	6 20	0,236635	13364
13 0	0,00196184		6 42 47		0,249999	
		9114		6 9		13159
12	0,00205298	9393	6 36 38	5 57	0,263158	12960
24	0,00214691	9675	6 30 41	5 47	0,276118	12766
36	0,00224366	9962	6 24 54	5 37	0,288884	12581
48	0,00234328	10252	6 19 17	5 28	0,301465	12399
14 0	0,00244580		6 13 49		0,313864	
		10547		5 19		12222
12	0,00255127	10846	6 8 30	5 9	0,326086	12049
24	0,00265973	11149	6 3 21	5 1	0,338135	11885
36	0,00277122	11456	5 58 19	4 53	0,350020	11721
48	0,00288578	11767	5 53 26	4 45	0,361741	11562
15 0	0,00300345		5 48 41		0,373303	

De Motu Cometarum in Orbibus Ellipticis.

Quod Plani hujus Orbis Elliptici longissime extensi positionem attinet, Nodos eosdem ac in Orbe Parabolico superius descripto retinemus, nempe ad $2^{\circ}. 2'$ Capricorni & Cancri; cum Inclinatione ad Planum Eclipticæ $61^{\circ}. 6'. 48''$. Perihelion vero Cometæ, in hoc Plano secundum seriem Signorum moti, incidit in $\text{I } 22^{\circ}. 44'. 25''$, adeoque Aphelion in $\text{II } 22^{\circ}. 44'. 25''$, five $9^{\circ}. 17'. 35''$ ante Nodum descendentem. Tempus æquatum Perihelii pono *Decemb. 7^{\circ}. 23^h. 9'* Londini; Anno scil. 1680. Motus autem medius diurnus fit $\frac{1}{3\frac{1}{2}}$ diurni Solis; hoc est 0,0000299167 ejusq; Logarithmus 5,475914, cui si addatur Logarithmus Temporis ante vel post Perihelion, statim habebitur Motus medius ad datum momentum.

Haud abs re erit fortasse si hujus etiam calculi Exemplum apponam. Anno 1680 *Novemb. 3. 16^h. 47'* Temp. æquat. & ad Meridianum Londini reducto, observavit D. *Gottfried Kirch, Coburgi Saxonie*, Cometam, in descensu versus Solem, adhuc omni caudâ destitutum, ac instar Nebulæ albentis absq; Nucleo, vix nudis Oculis conspicuum; dum scil. fortunâ duce Lunam & Martem ei vicinum Telescopio circumlustraret. Inter adjunctas autem Fixulas situm Phænomeni satis accurate descriptum dedit: Unde opitulante Reverendi D. *Pound* curiosâ industriâ, locum ejus respectu Eclipticæ satis accuratè obtinui $\text{Q } 29^{\circ}. 51'$, cum Latitudine Boreâ $1^{\circ}. 18'$. De hac autem Observatione vide *Philosoph. Transact. N^{\circ} 342*.

Jam præcessit hæc observatio Tempus Perihelii $34^d. 6^h. 22'$, five in decimalibus diei 34,2653. Hujus Log. 1,534854 Logarithmo medii Motus diurni additus fit 7,010768 Logarithmus medii Motus ad datum Tempus, qui proinde fit 3,001025105. Hunc Motum medium invenio in Tabulâ inter $10^{\circ}. 24'$, & $10^{\circ}. 36'$. Anomalix Eccentri, & interpolatione rite institutâ provenit angulus post Aphelion $8^{\circ}. 21'. 37''$, & Logarithmus distantix veræ Cometæ à Sole 0,061658. Loco Aphelii $\text{II } 22^{\circ}. 44'. 25''$ adde $8^{\circ}. 21'. 37''$, fiet locus Cometæ in Orbe suo $\text{Q } 1^{\circ}. 6'. 2''$, hoc est $0^{\circ}. 55'. 58''$ ante Nodum descendentem: Hinc locus ejus Heliocentricus ad Eclipticam reductus erit $\text{Q } 1^{\circ}. 34'. 58''$ cum $0^{\circ}. 49'. 0''$ Lat. Bor. & Distantix curtatæ Logarithmus 0,061614. Habuit autem Sol eodem tempore $\text{III } 22^{\circ}. 44'. 50''$, ac Log. distantix ejus à Terrâ 9,994672. E quibus datis, si Calculus Trigonometricus more in Planetis usitato adhibeatur, prodibit locus Cometæ Geocentricus $\text{Q } 29^{\circ}. 51'. 22''$ cum Latitudine Borea $1^{\circ}. 17'. 32''$, omnino prout observatus est.

Hæc autem *Kerchii* observatio sane nobilis est, non tantum quod tredecim diebus prior sit cæterorum omnium observatis; sed quod quasi sola & unica sit è multis, apud exteros de Cometâ matutino evulgatis, cui plena fides adhiberi

De Motu Cometarum in Orbibus Ellipticis.

hiberi possit. Iis quidem poliendis atq; inter se conferendis quantum operæ impendit sagacitas *Newtoniana*, vides apud ipsum in *Principiorum* Lib. III. quas tamen ut inter se ubiq; ferè nimium diffidentes, nec debitâ curâ instrumentisve idoneis captas, nos merito prætereundas censemus; cum Observata potius juxta Calculum, quam Calculus juxta Observata, æstimanda videantur.

Verum sequens Tabella curatissimam Motûs Cometæ vespertini seriem exhibet, magna ex parte ex Observationibus Sextante *Grenovicensi* prædicto habitis deductam, ac juxta reformata Fixarum loca è Catalogo *Britannico* desumpta, quoad ejus fieri potuit, verificatam. Duæ tantum ultimæ ipsius *Newtoni* sunt, Cometæ evanescentis motum ad Stellas in *Pede Persei* artificiosè æstimantis. Calculo autem accuratè juxta præmissa Elementa instituto, ecce consensum Supputatori quantumvis scrupuloso abunde satisfacturum.

MDCLXXX.			Cometæ Long.			Lat. Bor.			Cometæ Long.			Lat. Bor.			Differen.		Differen.	
Temp. Æquat.			Observat.			Observat.			Comput.			Comput.			Longit.		Latit.	
D.	H.	'	°	'	"	°	'	"	°	'	"	°	'	"	'	"	'	"
Nov.	3	16	47	♏	29	51	0	1	18	0	♏	29	51	22	1	17	32	+0 28
Dec.	12	4	46	♏	6	32	30	8	28	0	♏	6	31	20	8	29	6	+1 6
	21	6	37	♏	5	8	12	21	42	13	♏	5	6	14	21	44	42	+2 29
	24	6	18		18	49	23	25	23	5		18	47	30	25	23	35	+0 30
	26	5	21	♏	28	24	13	27	0	52	♏	28	21	42	27	2	1	+1 9
	29	8	3	♏	13	10	41	28	9	58	♏	13	11	14	28	10	38	+0 40
	30	8	10 ¹ / ₂	♏	17	38	20	28	11	53	♏	17	38	27	28	11	37	+0 16
Jan.	3	7	50	♏	2	53	0	27	7	48	♏	2	52	42	27	7	48	-0 18
1681.	5	6	1 ¹ / ₂		8	48	53	26	15	7		8	48	51	26	14	57	-0 10
	9	7	1		18	44	4	24	11	56		18	43	51	24	12	17	+0 21
	10	6	6		20	40	50	23	43	32		20	40	23	23	43	25	-0 7
	13	7	9	♏	25	59	48	22	17	28	♏	26	0	8	22	16	32	+0 56
	25	7	59	♏	9	35	0	17	56	30	♏	9	34	11	17	56	6	-0 24
	26	6	50		10	19	0	17	40	30		10	20	14	17	40	29	+1 14
Jan.	30	8	22		13	19	51	16	42	18		13	18	28	16	40	5	-1 23
Feb.	2	6	35		15	13	53	16	4	1		15	11	59	16	2	7	-1 54
	5	7	4 ¹ / ₂		16	59	6	15	27	3		16	59	17	15	27	0	+0 3
Mart.	1	11	10	♏	27	52	40	12	23	40	♏	27	51	47	12	22	38	-0 53
	9	8	38	♏	0	43	4	11	45	52	♏	0	42	43	11	45	35	-0 17

Experiantur itaq; *Vorticum* & *Pleni absoluti* fautores, an juxta Hypotheses suas poterint hujus Cometæ, per novem integra Signa ac spatium plusquam quadrimestre visi, cursum repræsentare; & an alia Curva, aliave in eâ motûs Lex à nostrâ sensibiliter diversa, singularem Viæ ejus Curvaturam, ac Velocitates diversimodè auctas ac minutas pari certitudine poterit exhibere.

Si

De Motu Cometarum in Orbibus Ellipticis.

Si hoc fieri nequeat, discant tandem missis nugis Veritatis studio indulgere, & cum *Regali Societate* nostrâ *Nullius in verba* jurare.

Cæterum hic Cometa, in ea Orbitæ suæ parte qua versus Solem descendit, ita Planetarum omnium semitis propinquus accessit, ut si forte transeuntem cuilibet è Planetis occurrere contigisset, fieri non potuit quin producerentur effectus valde sensibiles, motus quæ Cometæ maximas patiretur interturbationes. Hoc in casu multum immutari potuit Planum Speciesq; Ellipseos, Tempusq; Periodicum, præsertim ex occurso *Jovis*. In descensu nupero, Via vera Cometæ hujus parvo intervallo *Saturni* & *Jovis* Orbitas infra se reliquit ad Austrum: *Veneris* & *Mercurii* semitis multo propius accessit, *Martis* vero adhuc vicinior. Dum autem per Planum Eclipticæ transiit, ad Nodum sc. Austrinum, ita Terræ semitam appropinquavit, ut si diebus triginta uno serius Solem accessisset, vix semidiametro Solari Globum nostrum versus Boream reliquisset: Et proculdubio Vi Centripetâ ejus (quam cum magno *Newtono* Moli seu quantitati Materiæ in Cometa contentæ proportionalem supponimus) diversitatem aliquam in situ & Specie Orbis Terræ, Spatiiq; annui quantitate intulisset. Collisionem vero vel contactum tantorum Corporum ac tantâ vi motorum (quod quidem manifestum est minime impossibile esse) avortat DEUS. O. M. ne pereat funditus pulcherri-
mus hic rerum ordo & in Chaos antiquum redigatur. Sed hæc obiter.

Cum autem plusquam probabile sit cæteros Cometas in Catalogo nostro descriptos post absolutas Periodos suas iterum reversuros esse, unde datis temporibus Periodicis darentur etiam Orbitalium Ellipticarum Axes, ac proinde Species; ut Astronomis posteris Calculi operosi tædium pro posse sublevarem, adjicere placuit Tabulam sequentem, qua continentur Segmentorum Areæ duplæ, Sinuum Rectorum & Versorum Logarithmi cum eorundem differentiis, ipsiq; Sinus Versi, ad quintas graduum Anomalix Eccentri pares collecti. Jam si fiat ut Semiaxis major Ellipseos ad distantiam Periheliam, ita 1 ad quartam proportionalem, & hujus quartæ Logarithmo addantur Logarithmi Sinuum rectorum in Tabulâ figillatim, vel eorundem differentias additione continuâ, habebuntur duplæ Areæ Triangulorum duplis Segmentis in secunda Columnâ inventis addendæ, pro Medio Motu ad Anomalias Eccentri respectivè. Dein addantur pari modo Logarithmi Sinuum Versorum Logarithmo Eccentricitatis datæ, ac per totam seriem numerorum his summis competentium addatur ubiq; distantia Perihelia, & emerget Tabula verarum Cometæ à Sole distantiarum. Deniq; erit in omni casu ut distantia Cometæ à Sole ad Axem Orbitæ minorem, ita Sinus Anomalix Eccentri ad Sinum anguli ab Focum Ellipseos.

TABULA

**TABULA GENERALIS PRO EXPEDIENDO
CALCULO MOTUS COMETICI IN ELLIPSIBUS.**

<i>Anom. Eccen- tri.</i>	<i>Dupla Area Segmenti.</i>	<i>Anom. Ec- centri Sinus Logarith.</i>	<i>Differen- tia Sinu- um Logar.</i>	<i>Anom. Ec- centri Sinus Versus Log.</i>	<i>Differen- tia Sinu- um Ver- sus⁷ Log.</i>	<i>Anom. Eccen- tri Sinus Versus Naturalis.</i>
0	0,00000,000	0,000000		0,000000		0,0000000
12	0,00000,001	7,542906	301028	4,784784	602059	0,0000061
24	0,00000,006	7,843934	176087	5,386843	352180	0,0000244
36	0,00000,019	8,020021	124932	5,739023	249875	0,0000548
48	0,00000,045	8,144953	96902	5,988898	193816	0,0000975
1 0	0,00000,089	8,241855	79172	6,182714	158357	0,0001523
12	0,00000,153	8,321027	66935	6,341071	133888	0,0002194
24	0,00000,243	8,387962	57979	6,474959	115977	0,0002986
36	0,00000,363	8,445941	51137	6,590936	102298	0,0003899
48	0,00000,517	8,497078	45741	6,693234	91507	0,0004934
2 0	0,00000,709	8,542819	41374	6,784741	82776	0,0006092
12	0,00000,943	8,584193	37769	6,867517	75567	0,0007371
24	0,00001,225	8,621962	34740	6,943084	69513	0,0008772
36	0,00001,557	8,656702	32160	7,012597	64357	0,0010294
48	0,00001,945	8,688862	29938	7,076954	59914	0,0011939
3 0	0,00002,392	8,718800	28001	7,136868	56044	0,0013705
12	0,00002,903	8,746801	26300	7,192912	52643	0,0015592
24	0,00003,482	8,773101	24793	7,245555	49632	0,0017601
36	0,00004,133	8,797894	23448	7,295187	46946	0,0019732
48	0,00004,861	8,821342	22242	7,342133	44535	0,0021985
4 0	0,00005,670	8,843584	21154	7,386668	42361	0,0024360
12	0,00006,563	8,864738	20165	7,429029	40388	0,0026855
24	0,00007,546	8,884903	19265	7,469417	38590	0,0029472
36	0,00008,622	8,904168	18442	7,508007	36946	0,0032211
48	0,00009,796	8,922610	17686	7,544953	35436	0,0035071
5 0	0,00011,072	8,940296	16988	7,580389	34044	0,0038053
12	0,00012,454	8,957284	16344	7,614433	32758	0,0041156
24	0,00013,947	8,973628	15746	7,647191	31564	0,0044380
36	0,00015,534	8,989374	15189	7,678755	30455	0,0047726
48	0,00017,280	9,004563	14672	7,709210	29420	0,0051193
6 0	0,00019,129	9,019235		7,738630		0,0054781

**TABULA GENERALIS PRO EXPEDIENDO
CALCULO MOTUS COMETICI IN ELLIPSIBUS.**

<i>Anom. Eccen- tri.</i>	<i>Dupla Area Segmenti.</i>	<i>Anom. Ec- centri Sinus Logarith.</i>	<i>Diff. Sinuum Logar.</i>	<i>Anom. Ec- centri Sinus Versus Log.</i>	<i>Diff. Sinuum Versus⁷ Logar.</i>	<i>Anom. Eccent. Sinus Versus Naturalis.</i>
0						
6 0	0,00019129	9,019235		7,738630		0,0054781
12	0,00021106	9,033421	14186	7,767084	28454	0,0058491
24	0,00023214	9,047154	13733	7,794633	27549	0,0062320
36	0,00025458	9,060460	13306	7,821332	26699	0,0066272
48	0,00027842	9,073366	12906	7,847233	25901	0,0070344
7 0	0,00030370	9,085894	12528	7,872381	25148	0,0074539
12	0,00033047	9,098066	12172	7,896818	24437	0,0078853
24	0,00035877	9,109901	11835	7,920584	23766	0,0083288
36	0,00038863	9,121417	11516	7,943715	23131	0,0087844
48	0,00042011	9,132630	11213	7,966243	22528	0,0092521
8 0	0,00045324	9,143555	10925	7,988199	21956	0,0097319
12	0,00048806	9,154208	10653	8,009611	21412	0,0102238
24	0,00052463	9,164600	10392	8,030505	20894	0,0107277
36	0,00056297	9,174744	10144	8,050906	20401	0,0112436
48	0,00060314	9,184651	9907	8,070836	19930	0,0117717
9 0	0,00064517	9,194332	9681	8,090317	19481	0,0123117
12	0,00068910	9,203797	9465	8,109367	19050	0,0128638
24	0,00073499	9,213055	9258	8,128006	18639	0,0134278
36	0,00078286	9,222115	9060	8,146251	18245	0,0140039
48	0,00083277	9,230984	8869	8,164118	17867	0,0145921
10 0	0,00088475	9,239670	8686	8,181622	17504	0,0151922
12	0,00093884	9,248181	8511	8,198778	17156	0,0158044
24	0,00099510	9,256523	8342	8,215599	16821	0,0164286
36	0,00105355	9,264703	8180	8,232097	16498	0,0170646
48	0,00111424	9,272726	8023	8,248286	16189	0,0177128
11 0	0,00117722	9,280599	7873	8,264176	15890	0,0183728
12	0,00124252	9,288326	7727	8,279777	15601	0,0190449
24	0,00131019	9,295913	7587	8,295101	15324	0,0197288
36	0,00138027	9,303364	7451	8,310157	15056	0,0204247
48	0,00145280	9,310685	7321	8,324953	14796	0,0211326
12 0	0,00152782	9,317879	7194	8,339499	14546	0,0218524

TABULA GENERALIS PRO EXPEDIENDO CALCULO MOTUS COMETICI IN ELLIPSIBUS

<i>Anom. Eccen- tri.</i>	<i>Dupla Area Segmenti.</i>	<i>Anom. Ec- centri Sinus Logarith.</i>	<i>Diff. Sinu- um Logar.</i>	<i>Anom. Ec- centri Sinus Versus Log.</i>	<i>Diff. Sinuum Versus Logar.</i>	<i>Anom. Eccent. Sinus Versus Naturalis.</i>
0						
12 0	0,00152782	9,317879		8,339499		0,0218524
			7071		14304	
12	0,00160537	9,324950	6953	8,353803	14069	0,0225841
24	0,00168550	9,331903	6839	8,367872	13842	0,0233277
36	0,00176824	9,338742	6727	8,381715	13623	0,0240832
48	0,00185365	9,345469	6619	8,395338	13410	0,0248506
13 0	0,00194175	9,352088	6515	8,408747	13204	0,0256300
			6413		13003	
12	0,00203259	9,358603	6314	8,421951	12808	0,0264211
24	0,00212622	9,365016	6219	8,434954	12620	0,0272240
36	0,00222267	9,371330	6126	8,447762	12437	0,0280390
48	0,00232198	9,377549	6036	8,460382	12258	0,0288657
14 0	0,00242420	9,383675	5947	8,472819	12085	0,0297043
			5862		11917	
12	0,00252937	9,389711	5779	8,485077	11753	0,0305546
24	0,00263752	9,395658	5697	8,497162	11593	0,0314168
36	0,00274871	9,401520	5619	8,509079	11438	0,0322909
48	0,00286297	9,407299	5541	8,520832	11287	0,0331767
15 0	0,00298034	9,412996	5467	8,532425	11139	0,0340742
			5393		11096	
12	0,00310087	9,418615	5322	8,543863	10956	0,0349835
24	0,00322459	9,424156	5252	8,555150	10819	0,0359045
36	0,00335154	9,429623	5185	8,566289	10685	0,0368374
48	0,00348177	9,435016	5118	8,577285	10556	0,0377821
16 0	0,00361532	9,440338	5053	8,588141	10428	0,0387383
			4989		10305	
12	0,00375223	9,445590	4928	8,598860	10184	0,0397062
24	0,00389254	9,450775	4867	8,609445	10065	0,0406860
36	0,00403629	9,455893	4808	8,619901	9949	0,0416774
48	0,00418352	9,460946	4751	8,630229	9837	0,0426804
17 0	0,00433427	9,465935	4693	8,640434	9726	0,0436952
12	0,00448858	9,470863		8,650518		0,0447216
24	0,00464650	9,475730		8,660483		0,0457597
36	0,00480806	9,480538		8,670332		0,0468093
48	0,00497330	9,485289		8,680069		0,0478706
18 0	0,00514227	9,489982		8,689695		0,0489435

TABULA PARTIUM DIEI DECIMALIUM.

Hor.	Decimales partes.	Min.	Decimales partes.	Min.	Decimales partes.	Sec.	Decimales partes.
1	0,04166 ..	1	,000694 ..	31	,021527 ..	1	,000011574
2	0,08333 ..	2	,001388 ..	32	,022222 ..	2	,000023148
3	0,12500	3	,002083 ..	33	,022916 ..	3	,000034722 ..
4	0,16666 ..	4	,002777 ..	34	,023611 ..	4	,000046296
5	0,20833 ..	5	,003472 ..	35	,024305 ..	5	,000057870
6	0,25000	6	,004166 ..	36	,025000	6	,000069444 ..
7	0,29166 ..	7	,004861 ..	37	,025694 ..	7	,000081019
8	0,33333 ..	8	,005555 ..	38	,026388 ..	8	,000092593
9	0,37500	9	,006250	39	,027083 ..	9	,000104166 ..
10	0,41666 ..	10	,006944 ..	40	,027777 ..	10	,000115741
11	0,45833 ..	11	,007638 ..	41	,028472 ..	20	,000231482
12	0,50000	12	,008333 ..	42	,029166 ..	30	,000347222 ..
13	0,54166 ..	13	,009027 ..	43	,029861 ..	40	,000462963
14	0,58333 ..	14	,009722 ..	44	,030555 ..	50	,000578704
15	0,62500	15	,010416 ..	45	,031250	60	,000694444 ..
16	0,66666 ..	16	,011111 ..	46	,031944 ..	<i>Abacus pro longitudine Arcuum Circularem ad Radium 1.</i>	
17	0,70833 ..	17	,011805 ..	47	,032638 ..		
18	0,75000	18	,012500	48	,033333 ..		
19	0,79166 ..	19	,013194 ..	49	,034027 ..		
20	0,83333 ..	20	,013888 ..	50	,034722 ..		
						Gr.	<i>Arcuum Longit.</i>
21	0,87500	21	,014583 ..	51	,035416 ..	1	,0174532925
22	0,91666 ..	22	,015277 ..	52	,036111 ..	2	,0349065850
23	0,95833 ..	23	,015972 ..	53	,036805 ..	3	,0523598776
24	1,00000	24	,016666 ..	54	,037500 ..	4	,0698131701
25	1,04166 ..	25	,017361 ..	55	,038194 ..	5	,0872664626
26	1,08333 ..	26	,018055 ..	56	,038888 ..	6	,1047197551
27	1,12500	27	,018750	57	,039583 ..	7	,1221730477
28	1,16666 ..	28	,019444 ..	58	,040277 ..	8	,1396263402
29	1,20833 ..	29	,020138 ..	59	,040972 ..	9	,1570796327
30	1,25000	30	,020833 ..	60	,041666 ..	10	,1745329252

Decimales Numeri hac Notâ (..) terminati continuantur in infinitum repetitione Cyphra ultima.

Catalogus præcipuarum Fixarum, ad Annum
MDCCLXX *ineuntem.*

Stellarum Denominatio.	Longitudo.			Latitudo.			Mag.	
	°	'	"	°	'	"		
Extrema alæ Pegasi	γ	5	14	50	12	35	12 B	2
Caput Andromedæ	γ	10	23	53	25	41	1 B	2
Borea in ventre Ceti	γ	18	1	47	20	21	19 A	3
Nodus lini Piscium	γ	25	27	33	9	5	10 A	3
Clara Cinguli Andromedæ	γ	26	27	44	25	56	19 B	2
Australis in Cornu Arietis. 1 ^{ma} * γ.	γ	29	16	0	7	8	58 B	4
Borea in eodem Cornu	δ	0	3	0	8	28	16 B	3
Lucida Cathedræ Cassiopeïæ	δ	1	13	7	51	13	50 B	2
Lucida Arietis, supra verticem	δ	3	44	18	9	57	12 B	2
In pectore Cassiopeïæ. Schedir.	δ	3	55	21	46	35	54 B	2
In flexura ad coxas Cassiopeïæ	δ	10	3	44	48	47	35 B	2
Pes Australis Andromedæ	δ	10	20	44	27	46	7 B	2
Lucida Mandibulæ Ceti	δ	10	24	15	12	37	0 A	2
Genu Cassiopeïæ	δ	14	2	15	46	23	26 B	3
Caput Medusæ, Algol	δ	22	15	42	22	23	47 B	2
Lucida Pleiadum	δ	26	5	8	4	0	37 B	3
Lucida in latere Persei	δ	28	11	4	30	5	20 B	2
Prima Hyadum, in naribus Tauri	π	1	52	34	5	46	22 A	3
Oculus Boreus Tauri	π	4	32	11	2	35	58 A	3
Oculus ejus Austrinus, Aldebaran	π	5	52	0	5	29	50 A	1
Orionis pes lucidus, Rigel	π	12	55	0	31	10	11 A	1
Præcedens humerus Orionis	π	17	2	33	16	51	30 A	2
Capella, Hircus	π	17	56	41	22	51	47 B	1
Præcedens Clararum in Columba	π	18	16	38	57	24	15 A	2
Prima Balthei Orionis	π	18	26	38	23	36	7 A	2
Cornu Boreum Tauri	π	18	38	56	5	21	34 B	2
Media in Cingulo Orionis	π	19	32	44	24	33	23 A	2
Sequens in Cingulo Orionis	π	20	46	45	25	20	17 A	2
In extremitate Cornu Australis Tauri	π	20	52	55	2	14	24 A	3
Sequens clararum in Columba	π	22	31	5	59	15	8 A	2
Ultima Caudæ Ursæ minoris, Polaris	π	24	39	41	66	4	11 B	2
Sequens humerus Orionis	π	24	50	0	16	4	26 A	1
Sequens humerus Aurigæ	π	26	0	32	21	28	20 B	2
Præcedentis è Geminis pes prior	π	29	31	43	0	56	0 A	3
Sequens in eodem pede, Calx	σ	1	23	10	0	51	22 A	3

X x x x

In

X x x x

In

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Stellarum Denominatio.	Longitudo.			Latitudo.			Mag.	
	°	'	"	°	'	"		
In extremo pede priore Canis majoris	♊	3	17	58	41	17	47 A	2
Sequentis è Geminis Pes lucidus	♊	5	11	18	6	47	19 A	2
In Ore Canis majoris, <i>Sirius</i>	♊	10	14	0	39	32	8 A	1
In Genu sequentis è Geminis	♊	11	4	40	2	5	27 A	3
In Gubernaculo Argûs Navis, <i>Canopus</i>	♊	11	9	0	75	51	0 A	1
In inguine sequentis è Geminis	♊	14	36	20	0	13	7 A	3
Caput præcedentis è Geminis, <i>Castor</i>	♊	16	20	20	10	3	48 B	2
Inter femora Canis Majoris	♊	16	55	0	51	22	48 A	2
Caput sequentis è Geminis, <i>Pollux</i>	♊	19	21	9	6	39	27 B	2
In ventre Canis majoris	♊	19	32	5	48	27	33 A	2
Canis minor, <i>Procyon</i>	♊	21	55	21	15	57	55 A	1
In Cauda Canis majoris	♊	25	40	27	50	37	41 A	2
Asellus Boreus	♋	3	38	0	3	9	41 B	4
Asellus Austrinus	♋	4	48	40	0	3	46 B	4
Borea præcedentium in □ Ursæ majoris	♋	11	15	0	49	40	5 B	2
Clara in Tabulato Navis Argûs	♋	14	41	24	58	21	6 A	2
Austrina præcedentium in □ Ursæ majoris	♋	15	29	12	45	6	16 B	2
In Capite Leonis Australior	♋	16	47	16	9	41	4 B	3
Cor Hydræ	♋	23	23	0	22	24	32 A	2
Sub Tabulato Navis	♋	23	29	0	64	27	32 A	2
Trium in Collo Leonis Borea	♋	23	38	41	11	50	13 B	3
Australis Colli Leonis	♋	23	59	24	4	50	20 B	3
Media & Lucida Colli Leonis	♋	25	40	5	8	47	27 B	2
Cor Leonis, <i>Regulus</i>	♋	25	56	20	0	26	38 B	1
Inferior sequentium in □ Ursæ majoris	♋	26	31	35	47	7	26 B	2
Borea earundem	♋	27	5	40	51	39	36 B	3
Antepenultima Caudæ Draconis	♌	3	28	11	66	21	43 B	3
In Eductione Caudæ Ursæ majoris	♌	4	56	25	54	20	16 B	2
In Sectione Tabulati Navis	♌	7	17	0	55	52	30 A	2
Lucida in Lumbis Leonis	♌	7	22	21	14	19	4 B	2
Australis in Clune Leonis	♌	9	30	31	9	39	50 B	3
Penultima Caudæ Ursæ majoris	♌	11	44	0	56	23	15 B	2
Australis in Femore Leonis	♌	13	38	0	6	5	10 B	3
In Sectione Carinæ Argûs	♌	15	2	18	67	11	11 A	2
Cauda Leonis	♌	17	44	14	12	16	51 B	1

Lucida

Lucida

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<i>Stellarum Denominatio.</i>	<i>Longitudo.</i>			<i>Latitudo.</i>			<i>Mag.</i>
	°	'	"	°	'	"	
Lucida in inferiore Carinâ Navis	♏19	17	10	72	39	32 A	2
Clara informis inter Caudas Ursæ & Leonis	♏20	39	22	40	7	53 B	2
Ultima Caudæ Ursæ majoris	♏22	59	24	54	24	0 B	2
In ancone alæ Austrinæ Virginis	♏23	11	14	0	40	47 B	3
Sectionem Carinæ Navis sequentium Borea	♏24	59	30	63	42	23 A	3
Præcedens in ala Austrina Virginis	♏	0	55 52	1	22	1 B	3
Sectionem Carinæ sequentium Australis	♏	1	28 30	67	5	20 A	2
In ala Borea Virginis, <i>Vindemiatrix</i>	♏	6	2 40	16	12	54 B	3
Secunda Alæ Austrinæ Virginis	♏	6	17 11	2	48	53 B	3
Sub Cingulo Virginis in latere	♏	7	34 54	8	38	27 B	3
In humero præcedente Bootæ	♏	13	43 18	49	33	0 B	3
Spica Virginis	♏	19	56 22	2	2	0 A	1
Clara inter femora Bootæ, <i>Arcturus</i>	♏	20	18 52	30	57	0 B	1
Ad Radicem Roboris Carolini	♏	28	5	72	13	6 A	2
Lucida in lumbis Centauri	♏	28	26 56	40	7	20 A	2
Genu poster. præced. Centauri, <i>Ber. Crucis</i>	♏	2	51 9	47	45	51 A	2
In talo pedis ejusdem, <i>Sequens Crucis</i>	♏	7	46 12	48	35	3 A	2
In imo pede poster. seq. Centauri, <i>Pes Crucis</i>	♏	8	0 5	52	49	15 A	2
Lucida Coronæ Boreæ	♏	8	20 56	44	21	17 B	2
Lanx Austrina Libræ	♏	11	11 40	0	22	51 B	2
Lucida in alvo Centauri	♏	11	38 20	39	32	0 A	2
Lanx Borea Libræ	♏	15	27 40	8	31	45 B	2
Lucida colli Serpentis Ophiuchi	♏	18	8 22	25	31	56 B	2
In Genu sinistro priore Centauri	♏	19	54 30	44	4	47 A	2
In pede dextro priore ejusdem	♏	26	1 16	42	27	48 A	1
Clarior in sinistra manu Ophiuchi, <i>Ted.</i>	♏	28	23 15	17	17	15 B	3
Media trium in fronte Scorpïi	♏	28	40 50	1	56	31 A	2
Australis earundem	♏	29	2 25	5	25	46 A	3
Borea frontis Scorpïi	♏	29	17 56	1	3	9 B	2
Genu præcedens Ophiuchi	♏	5	18 55	11	25	27 B	3
Cor Scorpïi, <i>Antares</i>	♏	5	51 4	4	31	26 A	1
Caput Herculis	♏	12	13 47	37	18	55 B	3
Genu sequens Ophiuchi	♏	14	4 28	7	14	12 B	3
In Cuspide Trianguli Australis	♏	16	56 27	46	5	33 A	2
In Planta pedis Ophiuchi	♏	17	30 2	1	47	38 A	3

Caput

*Catalogus præcipuarum Fixarum, ad Annum
MDCCXX ineuntem.*

<i>Stellarum Denominatio.</i>	<i>Longitudo.</i>			<i>Latitudo.</i>			<i>Mag.</i>
	°	'	"	°	'	"	
Caput Ophiuchi	18	30	32	35	53	16 B	3
Aculeus Caudæ Scorpïi	20	40	0	13	43	25 A	2
Humerus sequens Ophiuchi	21	25	44	27	58	0 B	3
Spondylus quintus Caudæ Scorpïi	21	40	16	19	36	15 A	2
Lucida in capite Draconis	24	0	35	74	58	26 B	2
In Australi parte Arcus Sagittarii	1	10	33	10	59	54 A	2
Humerus sinister Sagittarii	8	28	12	3	23	32 A	3
Sub Axilla Sagittarii	9	42	22	7	7	55 A	3
Lucida Lyræ	11	22	18	61	45	31 B	1
Sequens in Capite Sagittarii	12	21	44	1	29	0 B	3
Oculus Pavonis	19	53	56	36	11	0 A	2
Rostrum Cygni	27	20	37	49	0	31 B	3
Lucida Aquilæ	27	48	24	29	19	11 B	1
Sequens è contiguis in Cornu Capricorni	29	57	21	6	58	6 B	3
Australis in eodem Cornu	0	8	57	4	37	27 B	3
Ala Gruis præcedens	11	56	35	32	50	22 A	2
Ala Borea Cygni	12	22	17	64	27	14 B	3
Præcedens duarum in Cauda Capricorni	17	52	42	2	31	18 A	3
In Educatione Caudæ Gruis	18	18	53	35	22	46 A	2
Humerus præcedens Aquarii	19	29	23	8	38	43 B	3
Sequens Caudæ Capricorni	19	38	14	2	32	19 A	3
Pectus Cygni	20	57	51	57	9	20 B	3
Ala Austrina Cygni	23	47	52	49	26	21 B	3
Os Pegasi	27	58	32	22	7	16 B	3
Humerus sequens Aquarii	29	27	16	10	40	38 B	3
In ore Piscis notii, <i>Fomalhaut</i>	29	54	0	21	4	54 A	1
Cauda Cygni	1	26	32	59	56	37 B	2
In Crure Aquarii, <i>Scheat</i>	4	58	49	8	11	17 A	3
Caput Hydri	7	59	0	64	11	0 A	2
In extremo Flumine, <i>Achernâr</i>	11	14	6	59	19	40 A	1
Clara in capite Phœnicis	11	30	27	40	34	10 A	2
In Humero Alæ Pegasi, <i>Markab</i>	19	34	13	19	24	37 B	2
In Crure Pegasi, <i>Scheat</i>	25	27	13	31	8	6 B	2
Borea Caudæ Ceti	27	0	0	10	0	41 A	3
Australis Caudæ Ceti	28	38	2	20	46	52 A	2

LOGA

TABULA LOGARITHMORUM
LOGISTICORUM

9	8	7	6	5	4	3	2	1	0	
0.17	0.18	0.19	0.20	0.21	0.22	0.23	0.24	0.25	0.26	

1.27	1.28	1.29	1.30	1.31	1.32	1.33	1.34	1.35	1.36	
2.37	2.38	2.39	2.40	2.41	2.42	2.43	2.44	2.45	2.46	
3.47	3.48	3.49	3.50	3.51	3.52	3.53	3.54	3.55	3.56	
4.57	4.58	4.59	4.60	4.61	4.62	4.63	4.64	4.65	4.66	
5.67	5.68	5.69	5.70	5.71	5.72	5.73	5.74	5.75	5.76	
6.77	6.78	6.79	6.80	6.81	6.82	6.83	6.84	6.85	6.86	
7.87	7.88	7.89	7.90	7.91	7.92	7.93	7.94	7.95	7.96	
8.97	8.98	8.99	9.00	9.01	9.02	9.03	9.04	9.05	9.06	
9.17	9.18	9.19	9.20	9.21	9.22	9.23	9.24	9.25	9.26	

10.27	10.28	10.29	10.30	10.31	10.32	10.33	10.34	10.35	10.36	
11.37	11.38	11.39	11.40	11.41	11.42	11.43	11.44	11.45	11.46	
12.47	12.48	12.49	12.50	12.51	12.52	12.53	12.54	12.55	12.56	
13.57	13.58	13.59	13.60	13.61	13.62	13.63	13.64	13.65	13.66	
14.67	14.68	14.69	14.70	14.71	14.72	14.73	14.74	14.75	14.76	
15.67	15.68	15.69	15.70	15.71	15.72	15.73	15.74	15.75	15.76	
16.67	16.68	16.69	16.70	16.71	16.72	16.73	16.74	16.75	16.76	
17.67	17.68	17.69	17.70	17.71	17.72	17.73	17.74	17.75	17.76	
18.67	18.68	18.69	18.70	18.71	18.72	18.73	18.74	18.75	18.76	
19.67	19.68	19.69	19.70	19.71	19.72	19.73	19.74	19.75	19.76	

20.67	20.68	20.69	20.70	20.71	20.72	20.73	20.74	20.75	20.76	
21.67	21.68	21.69	21.70	21.71	21.72	21.73	21.74	21.75	21.76	
22.67	22.68	22.69	22.70	22.71	22.72	22.73	22.74	22.75	22.76	
23.67	23.68	23.69	23.70	23.71	23.72	23.73	23.74	23.75	23.76	
24.67	24.68	24.69	24.70	24.71	24.72	24.73	24.74	24.75	24.76	
25.67	25.68	25.69	25.70	25.71	25.72	25.73	25.74	25.75	25.76	
26.67	26.68	26.69	26.70	26.71	26.72	26.73	26.74	26.75	26.76	
27.67	27.68	27.69	27.70	27.71	27.72	27.73	27.74	27.75	27.76	
28.67	28.68	28.69	28.70	28.71	28.72	28.73	28.74	28.75	28.76	
29.67	29.68	29.69	29.70	29.71	29.72	29.73	29.74	29.75	29.76	
30.67	30.68	30.69	30.70	30.71	30.72	30.73	30.74	30.75	30.76	
31.67	31.68	31.69	31.70	31.71	31.72	31.73	31.74	31.75	31.76	
32.67	32.68	32.69	32.70	32.71	32.72	32.73	32.74	32.75	32.76	
33.67	33.68	33.69	33.70	33.71	33.72	33.73	33.74	33.75	33.76	
34.67	34.68	34.69	34.70	34.71	34.72	34.73	34.74	34.75	34.76	
35.67	35.68	35.69	35.70	35.71	35.72	35.73	35.74	35.75	35.76	
36.67	36.68	36.69	36.70	36.71	36.72	36.73	36.74	36.75	36.76	
37.67	37.68	37.69	37.70	37.71	37.72	37.73	37.74	37.75	37.76	
38.67	38.68	38.69	38.70	38.71	38.72	38.73	38.74	38.75	38.76	
39.67	39.68	39.69	39.70	39.71	39.72	39.73	39.74	39.75	39.76	
40.67	40.68	40.69	40.70	40.71	40.72	40.73	40.74	40.75	40.76	

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**TABULA LOGARITHMORUM
LOGISTICORUM.**

1	0	1	2	3	4	5	6	7	8	9
//	0	60	120	180	240	300	360	420	480	540
0		17782	14771	13010	11761	10792	10000	9331	8751	8239
1	35563	17710	14735	12986	11743	10777	9988	9320	8742	8231
2	32553	17639	14699	12962	11725	10763	9976	9310	8733	8223
3	30792	17570	14664	12939	11707	10749	9964	9300	8724	8215
4	29542	17501	14629	12915	11689	10734	9952	9289	8715	8207
5	28573	17434	14594	12891	11671	10720	9940	9279	8706	8199
6	27782	17368	14559	12868	11654	10706	9928	9269	8697	8191
7	27112	17302	14525	12845	11636	10692	9916	9259	8688	8183
8	26532	17238	14491	12821	11619	10678	9905	9249	8679	8175
9	26021	17175	14457	12798	11601	10663	9893	9238	8670	8167
10	25563	17112	14424	12775	11584	10649	9881	9228	8661	8159
11	25149	17050	14390	12753	11566	10635	9869	9218	8652	8152
12	24771	16990	14357	12730	11549	10621	9858	9208	8643	8144
13	24424	16930	14325	12707	11532	10608	9846	9198	8635	8136
14	24102	16871	14292	12685	11515	10594	9834	9188	8626	8128
15	23802	16812	14260	12663	11498	10580	9823	9178	8617	8120
16	23522	16755	14228	12640	11481	10566	9811	9168	8608	8112
17	23259	16698	14196	12618	11464	10552	9800	9158	8599	8104
18	23010	16642	14165	12596	11447	10539	9788	9148	8591	8097
19	22775	16587	14133	12574	11430	10525	9777	9138	8582	8089
20	22553	16532	14102	12553	11413	10512	9765	9128	8573	8081
21	22341	16478	14071	12531	11397	10498	9754	9119	8565	8073
22	22139	16425	14040	12510	11380	10484	9742	9109	8556	8066
23	21946	16372	14010	12488	11363	10471	9731	9099	8547	8058
24	21761	16320	13979	12467	11347	10458	9720	9089	8539	8050
25	21584	16269	13949	12445	11331	10444	9708	9079	8530	8043
26	21413	16218	13919	12424	11314	10431	9697	9070	8522	8035
27	21249	16168	13890	12403	11298	10418	9686	9060	8513	8027
28	21091	16118	13860	12382	11282	10404	9675	9050	8504	8020
29	20939	16069	13831	12362	11266	10391	9664	9041	8496	8012
30	20792	16021	13802	12341	11249	10378	9652	9031	8487	8004

TABULA LOGARITHMORUM
LOGISTICORUM.

	0	1	2	3	4	5	6	7	8	9
"	0	60	120	180	240	300	360	420	480	540
30	20792	16021	13802	12341	11249	10378	9652	9031	8487	8004
31	20649	15973	13773	12320	11233	10365	9641	9021	8479	7997
32	20512	15925	13745	12300	11217	10352	9630	9012	8470	7989
33	20378	15878	13716	12279	11201	10339	9619	9002	8462	7981
34	20248	15832	13688	12259	11186	10326	9608	8992	8453	7974
35	20122	15786	13660	12239	11170	10313	9597	8983	8445	7966
36	20000	15740	13632	12218	11154	10300	9586	8973	8437	7959
37	19881	15695	13604	12198	11138	10287	9575	8964	8428	7951
38	19765	15651	13576	12178	11123	10274	9564	8954	8420	7944
39	19652	15607	13549	12159	11107	10261	9553	8945	8411	7936
40	19542	15563	13522	12139	11091	10248	9542	8935	8403	7929
41	19435	15520	13495	12119	11076	10235	9532	8926	8395	7921
42	19331	15477	13468	12099	11061	10223	9521	8917	8386	7914
43	19228	15435	13441	12080	11045	10210	9510	8907	8378	7906
44	19128	15393	13415	12061	11030	10197	9499	8898	8370	7899
45	19031	15351	13388	12041	11015	10185	9488	8888	8361	7891
46	18935	15310	13362	12022	10999	10172	9478	8879	8353	7884
47	18842	15269	13336	12003	10984	10160	9467	8870	8345	7877
48	18751	15229	13310	11984	10969	10147	9456	8861	8337	7869
49	18661	15189	13284	11965	10954	10135	9446	8851	8328	7862
50	18573	15149	13259	11946	10939	10122	9435	8842	8320	7855
51	18487	15110	13233	11927	10924	10110	9425	8833	8312	7847
52	18403	15071	13208	11908	10909	10098	9414	8824	8304	7840
53	18320	15032	13183	11889	10894	10085	9404	8814	8296	7832
54	18239	14994	13158	11871	10880	10073	9393	8805	8288	7825
55	18159	14956	13133	11852	10865	10061	9383	8796	8279	7818
56	18081	14918	13108	11834	10850	10049	9372	8787	8271	7811
57	18004	14881	13083	11816	10835	10036	9362	8778	8263	7803
58	17929	14844	13059	11797	10821	10024	9351	8769	8255	7796
59	17855	14808	13034	11779	10806	10012	9341	8760	8247	7789
60	17782	14771	13010	11761	10792	10000	9331	8751	8239	7782

TABULA LOGARITHMORUM
LOGISTICORUM.

	10	11	12	13	14	15	16	17	18	19	20	21
600	660	720	780	840	900	960	1020	1080	1140	1200	1260	
0	7782	7368	6990	6642	6320	6021	5740	5477	5229	4994	4771	4559
1	7774	7361	6984	6637	6315	6016	5736	5473	5225	4990	4768	4556
2	7767	7354	6978	6631	6310	6011	5731	5469	5221	4986	4764	4552
3	7760	7348	6972	6625	6305	6006	5727	5464	5217	4983	4760	4549
4	7753	7341	6966	6620	6300	6001	5722	5460	5213	4979	4757	4546
5	7745	7335	6960	6614	6294	5997	5718	5456	5209	4975	4753	4542
6	7738	7328	6954	6609	6289	5992	5713	5452	5205	4971	4750	4539
7	7731	7322	6948	6603	6284	5987	5709	5447	5201	4967	4746	4535
8	7724	7315	6942	6598	6279	5982	5704	5443	5197	4964	4742	4532
9	7717	7309	6936	6592	6274	5977	5700	5439	5193	4960	4739	4528
10	7710	7302	6930	6587	6269	5973	5695	5435	5189	4956	4735	4525
11	7703	7296	6924	6581	6264	5968	5691	5430	5185	4952	4732	4522
12	7696	7289	6918	6576	6259	5963	5686	5426	5181	4949	4728	4518
13	7688	7283	6912	6570	6254	5958	5682	5422	5177	4945	4724	4515
14	7681	7276	6906	6565	6248	5954	5677	5418	5173	4941	4721	4511
15	7674	7270	6900	6559	6243	5949	5673	5414	5169	4937	4717	4508
16	7667	7264	6894	6554	6238	5944	5669	5409	5165	4933	4714	4505
17	7660	7257	6888	6548	6233	5939	5664	5405	5161	4930	4710	4501
18	7653	7251	6882	6543	6228	5935	5660	5401	5157	4926	4707	4498
19	7646	7244	6877	6538	6223	5930	5655	5397	5153	4922	4703	4494
20	7639	7238	6871	6532	6218	5925	5651	5393	5149	4918	4699	4491
21	7632	7232	6865	6527	6213	5920	5646	5389	5145	4915	4696	4488
22	7625	7225	6859	6521	6208	5916	5642	5384	5141	4911	4692	4484
23	7618	7219	6853	6516	6203	5911	5637	5380	5137	4907	4689	4481
24	7611	7212	6847	6510	6198	5906	5633	5376	5133	4903	4685	4477
25	7604	7206	6841	6505	6193	5902	5629	5372	5129	4900	4682	4474
26	7597	7200	6836	6500	6188	5897	5624	5368	5125	4896	4678	4471
27	7590	7193	6830	6494	6183	5892	5620	5364	5122	4892	4675	4467
28	7583	7187	6824	6489	6178	5888	5615	5359	5118	4889	4671	4464
29	7577	7181	6818	6484	6173	5883	5611	5355	5114	4885	4668	4460
30	7570	7175	6812	6478	6168	5878	5607	5351	5110	4881	4664	4457

TABULA LOGARITHMORUM LOGISTICORUM.

	10	11	12	13	14	15	16	17	18	19	20	21
00	600	660	720	780	840	900	960	1020	1080	1140	1200	1260
30	7570	7175	6812	6478	6168	5878	5607	5351	5110	4881	4664	4457
31	7563	7168	6807	6473	6163	5874	5602	5347	5106	4877	4660	4454
32	7556	7162	6801	6467	6158	5869	5598	5343	5102	4874	4657	4450
33	7549	7156	6795	6462	6153	5864	5594	5339	5098	4870	4653	4447
34	7542	7149	6789	6457	6148	5860	5589	5335	5094	4866	4650	4444
35	7535	7143	6784	6451	6143	5855	5585	5331	5090	4863	4646	4440
36	7528	7137	6778	6446	6138	5850	5580	5326	5086	4859	4643	4437
37	7522	7131	6772	6441	6133	5846	5576	5322	5082	4855	4639	4434
38	7515	7124	6766	6435	6128	5841	5572	5318	5079	4852	4636	4430
39	7508	7118	6761	6430	6123	5836	5567	5314	5075	4848	4632	4427
40	7501	7112	6755	6425	6118	5832	5563	5310	5071	4844	4629	4424
41	7494	7106	6749	6420	6113	5827	5559	5306	5067	4841	4625	4420
42	7488	7100	6743	6414	6108	5823	5554	5302	5063	4837	4622	4417
43	7481	7093	6738	6409	6103	5818	5550	5298	5059	4833	4618	4414
44	7474	7087	6732	6404	6099	5813	5546	5294	5055	4830	4615	4410
45	7467	7081	6726	6398	6094	5809	5541	5290	5051	4826	4611	4407
46	7461	7075	6721	6393	6089	5804	5537	5285	5048	4822	4608	4404
47	7454	7069	6715	6388	6084	5800	5533	5281	5044	4819	4604	4400
48	7447	7063	6709	6383	6079	5795	5528	5277	5040	4815	4601	4397
49	7441	7057	6704	6377	6074	5790	5524	5273	5036	4811	4597	4394
50	7434	7050	6698	6372	6069	5786	5520	5269	5032	4808	4594	4390
51	7427	7044	6692	6367	6064	5781	5516	5265	5028	4804	4590	4387
52	7421	7038	6687	6362	6059	5777	5511	5261	5025	4800	4587	4384
53	7414	7032	6681	6357	6055	5772	5507	5257	5021	4797	4584	4380
54	7407	7026	6676	6351	6050	5768	5503	5253	5017	4793	4580	4377
55	7401	7020	6670	6346	6045	5763	5498	5249	5013	4789	4577	4374
56	7394	7014	6664	6341	6040	5758	5494	5245	5009	4786	4573	4370
57	7387	7008	6659	6336	6035	5754	5490	5241	5005	4782	4570	4367
58	7381	7002	6653	6331	6030	5749	5486	5237	5002	4778	4566	4364
59	7374	6996	6648	6325	6025	5745	5481	5233	4998	4775	4563	4361
60	7368	6990	6642	6320	6021	5740	5477	5229	4994	4771	4559	4357

TABULA LOGARITHMORUM LOGISTICORUM.

	22	23	24	25	26	27	28	29	30	31	32	33
//	1320	1380	1440	1500	1560	1620	1680	1740	1800	1860	1920	1980
0	4357	4164	3979	3802	3632	3468	3310	3158	3010	2868	2730	2596
1	4354	4161	3976	3799	3629	3465	3307	3155	3008	2866	2728	2594
2	4351	4158	3973	3796	3626	3463	3305	3153	3005	2863	2725	2592
3	4347	4155	3970	3793	3623	3460	3302	3150	3003	2861	2723	2590
4	4344	4152	3967	3791	3621	3457	3300	3148	3001	2859	2721	2588
5	4341	4149	3964	3788	3618	3454	3297	3145	2998	2856	2719	2585
6	4338	4145	3961	3785	3615	3452	3294	3143	2996	2854	2716	2583
7	4334	4142	3958	3782	3612	3449	3292	3140	2993	2852	2714	2581
8	4331	4139	3955	3779	3610	3446	3289	3138	2991	2849	2712	2579
9	4328	4136	3952	3776	3607	3444	3287	3135	2989	2847	2710	2577
10	4325	4133	3949	3773	3604	3441	3284	3133	2986	2845	2707	2574
11	4321	4130	3946	3770	3601	3438	3282	3130	2984	2842	2705	2572
12	4318	4127	3943	3768	3598	3436	3279	3128	2981	2840	2703	2570
13	4315	4124	3940	3765	3596	3433	3276	3125	2979	2838	2701	2568
14	4311	4120	3937	3762	3593	3431	3274	3123	2977	2835	2698	2566
15	4308	4117	3934	3759	3590	3428	3271	3120	2974	2833	2696	2564
16	4305	4114	3931	3756	3587	3425	3269	3118	2972	2831	2694	2561
17	4302	4111	3928	3753	3585	3423	3266	3115	2969	2828	2692	2559
18	4298	4108	3925	3750	3582	3420	3264	3113	2967	2826	2689	2557
19	4295	4105	3922	3747	3579	3417	3261	3110	2965	2824	2687	2555
20	4292	4102	3919	3745	3576	3415	3259	3108	2962	2821	2685	2553
21	4289	4099	3917	3742	3574	3412	3256	3105	2960	2819	2683	2551
22	4285	4096	3914	3739	3571	3409	3253	3103	2958	2817	2681	2548
23	4282	4092	3911	3736	3568	3407	3251	3101	2955	2815	2678	2546
24	4279	4089	3908	3733	3565	3404	3248	3098	2953	2812	2676	2544
25	4276	4086	3905	3730	3563	3401	3246	3096	2950	2810	2674	2542
26	4273	4083	3902	3727	3560	3399	3243	3093	2948	2808	2672	2540
27	4269	4080	3899	3725	3557	3396	3241	3091	2945	2805	2669	2538
28	4266	4077	3896	3722	3555	3393	3238	3088	2943	2803	2667	2535
29	4263	4074	3893	3719	3552	3391	3236	3086	2941	2801	2665	2533
30	4260	4071	3890	3716	3549	3388	3233	3083	2939	2798	2663	2531

TABULA LOGARITHMORUM LOGISTICORUM.

1	22	23	24	25	26	27	28	29	30	31	32	33
11	1320	1380	1440	1500	1560	1620	1680	1740	1800	1860	1920	1980
30	4260	4071	3890	3716	3549	3388	3233	3083	2939	2798	2663	2531
31	4256	4068	3887	3713	3546	3386	3231	3081	2936	2796	2660	2529
32	4253	4065	3884	3710	3544	3383	3228	3078	2934	2794	2658	2527
33	4250	4062	3881	3708	3541	3380	3225	3076	2931	2792	2656	2525
34	4247	4059	3878	3705	3538	3378	3223	3073	2929	2789	2654	2522
35	4244	4055	3875	3702	3535	3375	3220	3071	2927	2787	2652	2520
36	4240	4052	3872	3699	3533	3372	3218	3069	2924	2785	2649	2518
37	4237	4049	3869	3696	3530	3370	3215	3066	2922	2782	2647	2516
38	4234	4046	3866	3693	3527	3367	3213	3064	2920	2780	2645	2514
39	4231	4043	3863	3691	3525	3365	3210	3061	2917	2778	2643	2512
40	4228	4040	3860	3688	3522	3362	3208	3059	2915	2775	2640	2510
41	4224	4037	3857	3685	3519	3359	3205	3056	2912	2773	2638	2507
42	4221	4034	3855	3682	3516	3357	3203	3054	2910	2771	2636	2505
43	4218	4031	3852	3679	3514	3354	3200	3052	2908	2769	2634	2503
44	4215	4028	3849	3677	3511	3351	3198	3049	2905	2766	2632	2501
45	4212	4025	3846	3674	3508	3349	3195	3047	2903	2764	2629	2499
46	4209	4022	3843	3671	3506	3346	3193	3044	2901	2762	2627	2497
47	4205	4019	3840	3668	3503	3344	3190	3042	2898	2760	2625	2494
48	4202	4016	3837	3665	3500	3341	3188	3039	2896	2757	2623	2492
49	4199	4013	3834	3663	3497	3338	3185	3037	2894	2755	2621	2490
50	4196	4010	3831	3660	3495	3336	3183	3034	2891	2753	2618	2488
51	4193	4007	3828	3657	3492	3333	3180	3032	2889	2750	2616	2486
52	4189	4004	3825	3654	3489	3331	3178	3030	2887	2748	2614	2484
53	4186	4001	3822	3651	3487	3328	3175	3027	2884	2746	2612	2482
54	4183	3998	3820	3649	3484	3325	3173	3025	2882	2744	2610	2480
55	4180	3995	3817	3646	3481	3323	3170	3022	2880	2741	2607	2477
56	4177	3991	3814	3643	3479	3320	3168	3020	2877	2739	2605	2475
57	4174	3988	3811	3640	3476	3318	3165	3018	2875	2737	2603	2473
58	4171	3985	3808	3637	3473	3315	3163	3015	2873	2735	2601	2471
59	4167	3982	3805	3635	3471	3313	3160	3013	2870	2732	2599	2469
60	4164	3979	3802	3632	3468	3310	3158	3010	2868	2730	2596	2467

TABULA LOGARITHMORUM
LOGISTICORUM.

	34	35	36	37	38	39	40	41	42	43	44	45
//	2040	2100	2160	2220	2280	2340	2400	2460	2520	2580	2640	2700
0	2467	2341	2218	2099	1984	1871	1761	1654	1549	1447	1347	1249
1	2465	2339	2216	2098	1982	1869	1759	1652	1547	1445	1345	1248
2	2462	2337	2214	2096	1980	1867	1757	1650	1546	1443	1344	1246
3	2460	2335	2212	2094	1978	1865	1755	1648	1544	1442	1342	1245
4	2458	2333	2210	2092	1976	1863	1754	1647	1542	1440	1340	1243
5	2456	2331	2208	2090	1974	1862	1752	1645	1540	1438	1339	1241
6	2454	2328	2206	2088	1972	1860	1750	1643	1539	1437	1337	1240
7	2452	2326	2204	2086	1970	1858	1748	1641	1537	1435	1335	1238
8	2450	2324	2202	2084	1968	1856	1746	1640	1535	1433	1334	1237
9	2448	2322	2200	2082	1967	1854	1745	1638	1534	1432	1332	1235
10	2445	2320	2198	2080	1965	1852	1743	1636	1532	1430	1331	1233
11	2443	2318	2196	2078	1963	1850	1741	1634	1530	1428	1329	1232
12	2441	2316	2194	2076	1961	1849	1739	1633	1528	1427	1327	1230
13	2439	2314	2192	2074	1959	1847	1737	1631	1527	1425	1326	1229
14	2437	2312	2190	2072	1957	1845	1736	1629	1525	1423	1324	1227
15	2435	2310	2188	2070	1955	1843	1734	1627	1523	1422	1322	1225
16	2433	2308	2186	2068	1953	1841	1732	1626	1522	1420	1321	1224
17	2431	2306	2184	2066	1951	1839	1730	1624	1520	1418	1319	1222
18	2429	2304	2182	2064	1950	1838	1728	1622	1518	1417	1317	1221
19	2426	2302	2180	2062	1948	1836	1727	1620	1516	1415	1316	1219
20	2424	2300	2178	2061	1946	1834	1725	1619	1515	1413	1314	1217
21	2422	2298	2176	2059	1944	1832	1723	1617	1513	1412	1313	1216
22	2420	2296	2174	2057	1942	1830	1721	1615	1511	1410	1311	1214
23	2418	2294	2172	2055	1940	1828	1719	1613	1510	1408	1309	1213
24	2416	2291	2170	2053	1938	1827	1718	1612	1508	1407	1308	1211
25	2414	2289	2169	2051	1936	1825	1716	1610	1506	1405	1306	1209
26	2412	2287	2167	2049	1934	1823	1714	1608	1504	1403	1304	1208
27	2410	2285	2165	2047	1933	1821	1712	1606	1503	1402	1303	1206
28	2408	2283	2163	2045	1931	1819	1711	1605	1501	1400	1301	1205
29	2405	2281	2161	2043	1929	1817	1709	1603	1499	1398	1300	1203
30	2403	2279	2159	2041	1927	1816	1707	1601	1498	1397	1298	1201

TABULA LOGARITHMORUM
LOGISTICORUM.

	34	35	36	37	38	39	40	41	42	43	44	45
//	2040	2100	2160	2220	2280	2340	2400	2460	2520	2580	2640	2700
30	2403	2279	2159	2041	1927	1816	1707	1601	1498	1397	1298	1201
31	2401	2277	2157	2039	1925	1814	1705	1599	1496	1395	1296	1200
32	2399	2275	2155	2037	1923	1812	1703	1598	1494	1393	1295	1198
33	2397	2273	2153	2035	1921	1810	1702	1596	1493	1392	1293	1197
34	2395	2271	2151	2033	1919	1808	1700	1594	1491	1390	1291	1195
35	2393	2269	2149	2032	1918	1806	1698	1593	1489	1388	1290	1193
36	2391	2267	2147	2030	1916	1805	1696	1591	1487	1387	1288	1192
37	2389	2265	2145	2028	1914	1803	1694	1589	1486	1385	1287	1190
38	2387	2263	2143	2026	1912	1801	1693	1587	1484	1383	1285	1189
39	2384	2261	2141	2024	1910	1799	1691	1585	1482	1382	1283	1187
40	2382	2259	2139	2022	1908	1797	1689	1584	1481	1380	1282	1186
41	2380	2257	2137	2020	1906	1795	1687	1582	1479	1378	1280	1184
42	2378	2255	2135	2018	1904	1794	1686	1580	1477	1377	1278	1182
43	2376	2253	2133	2016	1903	1792	1684	1578	1476	1375	1277	1181
44	2374	2251	2131	2014	1901	1790	1682	1577	1474	1373	1275	1179
45	2372	2249	2129	2012	1899	1788	1680	1575	1472	1372	1274	1178
46	2370	2247	2127	2010	1897	1786	1678	1573	1470	1370	1272	1176
47	2368	2245	2125	2009	1895	1785	1677	1571	1469	1368	1270	1174
48	2366	2243	2123	2007	1893	1783	1675	1570	1467	1367	1269	1173
49	2364	2241	2121	2005	1891	1781	1673	1568	1465	1365	1267	1171
50	2362	2239	2119	2003	1889	1779	1671	1566	1464	1363	1266	1170
51	2359	2237	2117	2001	1888	1777	1670	1565	1462	1362	1264	1168
52	2357	2235	2115	1999	1886	1775	1668	1563	1460	1360	1262	1167
53	2355	2233	2113	1997	1884	1774	1666	1561	1459	1359	1261	1165
54	2353	2231	2111	1995	1882	1772	1664	1559	1457	1357	1259	1163
55	2351	2229	2109	1993	1880	1770	1663	1558	1455	1355	1257	1162
56	2349	2227	2107	1991	1878	1768	1661	1556	1454	1354	1256	1160
57	2347	2225	2105	1989	1876	1766	1659	1554	1452	1352	1254	1159
58	2345	2223	2103	1987	1875	1765	1657	1552	1450	1350	1253	1157
59	2343	2220	2101	1986	1873	1763	1655	1551	1449	1349	1251	1156
60	2341	2218	2099	1984	1871	1761	1654	1549	1447	1347	1249	1154

TABULA LOGARITHMORUM
LOGISTICORUM.

	46	47	48	49	50	51	52	53	54	55	56	57	58	59
//	2760	2820	2880	2940	3000	3060	3120	3180	3240	3300	3360	3420	3480	3540
0	1154	1061	969	880	792	706	621	539	458	378	300	223	147	73
1	1152	1059	968	878	790	704	620	537	456	377	298	221	146	72
2	1151	1057	966	877	789	703	619	536	455	375	297	220	145	71
3	1149	1056	965	875	787	702	617	535	454	374	296	219	143	69
4	1148	1054	963	874	786	700	616	533	452	373	294	218	142	68
5	1146	1053	962	872	785	699	615	532	451	371	293	216	141	67
6	1145	1051	960	871	783	697	613	531	450	370	292	215	140	66
7	1143	1050	959	869	782	696	612	529	448	369	291	214	139	64
8	1141	1048	957	868	780	694	610	528	447	367	289	213	137	63
9	1140	1047	956	866	779	693	609	526	446	366	288	211	136	62
10	1138	1045	954	865	777	692	608	525	444	365	287	210	135	61
11	1137	1044	953	863	776	690	606	524	443	363	285	209	134	60
12	1135	1042	951	862	774	689	605	522	442	362	284	208	132	58
13	1134	1041	950	860	773	687	603	521	440	361	283	206	131	57
14	1132	1039	948	859	772	686	602	520	439	359	282	205	130	56
15	1130	1037	947	857	770	685	601	518	438	358	280	204	129	55
16	1129	1036	945	856	769	683	599	517	436	357	279	202	127	53
17	1127	1034	944	855	767	682	598	516	435	356	278	201	126	52
18	1126	1033	942	853	766	680	596	514	434	354	276	200	125	51
19	1124	1031	941	852	764	679	595	513	432	353	275	199	124	50
20	1123	1030	939	850	763	678	594	512	431	352	274	197	122	49
21	1121	1028	938	849	762	676	592	510	430	350	273	196	121	47
22	1119	1027	936	847	760	675	591	509	428	349	271	195	120	46
23	1118	1025	935	846	759	673	590	507	427	348	270	194	119	45
24	1116	1024	933	844	757	672	588	506	426	346	269	192	117	44
25	1115	1022	932	843	756	670	587	505	424	345	267	191	116	42
26	1113	1021	930	841	754	669	585	503	423	344	266	190	115	41
27	1112	1019	929	840	753	668	584	502	422	342	265	189	114	40
28	1110	1018	927	838	751	666	583	501	420	341	264	187	112	39
29	1109	1016	926	837	750	665	581	499	419	340	262	186	111	38
30	1107	1015	924	835	749	663	580	498	418	339	261	185	110	36

TABULA LOGARITHMORUM

LOGISTICORUM.

	46	47	48	49	50	51	52	53	54	55	56	57	58	59
//	2760	2820	2880	2940	3000	3060	3120	3180	3240	3300	3360	3420	3480	3540
30	1107	1015	924	835	749	663	580	498	418	339	261	185	110	36
31	1105	1013	923	834	747	662	579	497	416	337	260	184	109	35
32	1104	1012	921	833	746	661	577	495	415	336	258	182	107	34
33	1102	1010	920	831	744	659	576	494	414	335	257	181	106	33
34	1101	1008	918	830	743	658	574	493	412	333	256	180	105	31
35	1099	1007	917	828	741	656	573	491	411	332	255	179	104	30
36	1098	1005	915	827	740	655	572	490	410	331	253	177	103	29
37	1096	1004	914	825	739	654	570	489	408	329	252	176	101	28
38	1095	1002	912	824	737	652	569	487	407	328	251	175	100	27
39	1093	1001	911	822	736	651	568	486	406	327	250	174	99	25
40	1091	999	909	821	734	649	566	484	404	326	248	172	98	24
41	1090	998	908	819	733	648	565	483	403	324	247	171	96	23
42	1088	996	906	818	731	647	563	482	402	323	246	170	95	22
43	1087	995	905	816	730	645	562	480	400	322	244	169	94	21
44	1085	993	903	815	729	644	561	479	399	320	243	167	93	19
45	1084	992	902	814	727	642	559	478	398	319	242	166	91	18
46	1082	990	900	812	726	641	558	476	396	318	241	165	90	17
47	1081	989	899	811	724	640	557	475	395	316	239	163	89	16
48	1079	987	897	809	723	638	555	474	394	315	238	162	88	15
49	1078	986	896	808	721	637	554	472	392	314	237	161	87	13
50	1076	984	894	806	720	635	552	471	391	313	235	160	85	12
51	1074	983	893	805	719	634	551	470	390	311	234	158	84	11
52	1073	981	891	803	717	633	550	468	388	310	233	157	83	10
53	1071	980	890	802	716	631	548	467	387	309	232	156	82	8
54	1070	978	888	801	714	630	547	466	386	307	230	155	80	7
55	1068	977	887	799	713	628	546	464	384	306	229	153	79	6
56	1067	975	885	798	711	627	544	463	383	305	228	152	78	5
57	1065	974	884	796	710	626	543	462	382	304	227	151	77	4
58	1064	972	883	795	709	624	541	460	381	302	225	150	75	2
59	1062	971	881	793	707	623	540	459	379	301	224	148	74	1
60	1061	969	880	792	706	621	539	458	378	300	223	147	73	0

LOGARITHMORUM LOGISTICORUM.
SUPPLEMENTUM.

	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
//	3600	3660	3720	3780	3840	3900	3960	4020	4080	4140	4200	4260	4320	4380	4440
0	0	71	142	212	280	347	414	479	543	607	669	731	792	851	911
2	2	74	144	214	282	350	416	481	545	609	671	733	794	853	912
4	5	76	147	216	285	352	418	483	548	611	673	735	796	855	914
6	7	79	149	218	287	354	420	485	550	613	675	737	798	857	916
8	9	81	151	221	289	356	422	488	552	615	677	739	800	859	918
10	12	83	154	223	291	358	425	490	554	617	679	741	802	861	920
12	14	86	156	225	294	361	427	492	556	619	682	743	804	863	922
14	17	88	158	228	296	363	429	494	558	621	684	745	806	865	924
16	19	90	161	230	298	365	431	496	560	623	686	747	808	867	926
18	21	93	163	232	300	367	433	498	562	626	688	749	810	869	928
20	24	95	165	235	303	370	436	500	565	628	690	751	812	871	930
22	26	98	168	237	305	372	438	503	567	630	692	753	814	873	932
24	29	100	170	239	307	374	440	505	569	632	694	755	816	875	934
26	31	102	172	241	309	376	442	507	571	634	696	757	818	877	936
28	33	105	175	244	312	378	444	509	573	636	698	759	820	879	938
30	36	107	177	246	314	381	446	511	575	638	700	761	822	881	940
32	38	109	179	248	316	383	449	513	577	640	702	763	824	883	942
34	41	112	182	250	318	385	451	516	579	642	704	765	826	885	944
36	43	114	184	253	321	387	453	518	581	644	706	767	828	887	946
38	45	116	186	255	323	389	455	520	584	646	708	769	830	889	948
40	48	119	189	257	325	392	457	522	586	648	710	771	832	891	949
42	50	121	191	260	327	394	459	524	588	651	712	773	834	893	951
44	52	123	193	262	329	396	462	526	590	653	714	775	836	895	953
46	55	126	195	264	332	398	464	528	592	655	716	777	838	897	955
48	57	128	198	266	334	400	466	530	594	657	719	779	840	899	957
50	60	130	200	269	336	403	468	533	596	659	721	781	841	901	959
52	62	133	202	271	338	405	470	535	598	661	723	783	843	903	961
54	64	135	205	273	341	407	472	537	600	663	725	785	845	905	963
56	67	137	207	275	343	409	475	539	602	665	727	787	847	907	965
58	69	140	209	278	345	411	477	541	605	667	729	790	849	909	967
60	71	142	212	280	347	413	479	543	607	669	731	792	851	911	969

*Hæc pars Tabulæ Logisticæ addenda est cum est in Primo termino proportionis,
subtrahenda in Secundo & Tertio.*

F I N I S.



LUNÆ MERIDIANÆ

ASCENSIONES RECTÆ GRENOVICI OBSERVATÆ

a die Jan. 13. Anni Juliani MDCCXXII ad

diem Dec. 4. Anni MDCCXXV,

ET EJUSDEM

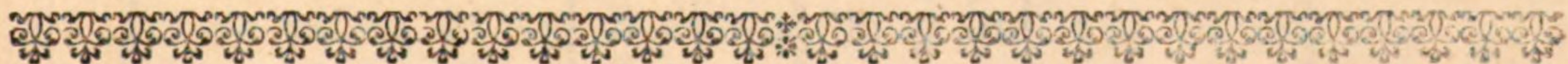
LONGITUDINES IBIDEM OBSERVATÆ

a die Dec. 5. Anni Juliani MDCCXXV ad

diem Dec. 27. Anni MDCCXXXIX.

CUM COMPUTO TABULARUM

COLLATÆ.



LUNAE MERIDIANAE

ASCENSIONES RECTAE GREGORIANAE OBSERVATAE

a die Jan 18. Anni Juliani MDCCXXII ad

diem Dec 4. Anni MDCCXXV.

ET EJUSDEM

LONGITUDINES IBIDEM OBSERVATAE

a die Dec 5. Anni Juliani MDCCXXV ad

diem Dec 27. Anni MDCCXXIX.

CUM COMPUTO TABULARUM

COLLATAE

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
Jan.					6	10	7	3	5	54	39	14	0	39	13	25	—0	35
	14	7	7	53	6	11	2	3	17	57	51	42	0	51	41	3	—0	57
	15	7	54	20	6	11	58	3	29	41	64	20	0	64	19	40	—0	20
	16	8	41	53	6	12	54	4	11	8	77	14	10	77	13	24	—0	46
	17	9	30	20	6	13	49	4	22	22	90	22	0	90	21	53	—0	7
	18	10	19	18	6	14	45	5	3	27	103	37	50	103	37	45	—0	5
	19	11	8	14	6	15	41	5	14	27	116	53	0	116	51	40	—1	20
Cent.	20	11	57	30	6	16	37	5	25	26	130	13	0	130	10	35	—2	25
Feb.					7	6	58	3	9	6	72	35	0	72	33	44	—1	16
	13	7	25	44	7	7	54	3	20	42	85	44	45	85	43	36	—1	9
	14	8	14	45	7	8	49	4	2	5	99	1	0	99	0	34	—0	26
	15	9	3	42	7	9	44	4	13	19	112	17	0	112	17	23	+0	23
	16	9	52	11	7	10	39	4	24	29	125	25	0	125	24	20	—0	40
Cent.	19	12	11	42	7	13	24	5	28	2	163	21	0	163	17	40	—3	20
	21	13	40	25	7	15	14	6	21	7	187	33	30	187	29	50	—3	40
	24	15	57	34	7	17	58	7	27	52	224	53	40	224	48	43	—4	57
	25	16	48	2	7	18	53	8	10	51	238	32	0	238	27	20	—4	40
Mart.					8	0	45	2	6	23	67	2	45	67	3	16	+0	31
	15	7	46	25	8	4	23	3	22	54	120	30	0	120	29	0	—1	0
	16	8	34	13	8	5	17	4	4	15	133	28	0	133	27	0	—1	0
	17	9	20	42	8	6	11	4	15	36	146	6	20	146	5	45	—0	35
	18	10	6	2	8	7	6	4	27	1	158	27	20	158	26	48	—0	32
	19	10	50	30	8	7	59	5	8	32	170	35	0	170	32	50	—2	10
Cent.	20	11	35	35	8	8	54	5	20	14	182	52	40	182	50	0	—2	40
	22	13	6	41	8	10	42	6	14	21	207	41	0	207	36	28	—4	32
:	24	14	45	11	8	12	30	7	9	42	234	10	30	234	7	0	—3	30
	25	15	38	2	8	13	24	7	22	54	248	35	0	248	30	42	—4	18
	26	16	34	36	8	14	18	8	6	22	263	44	30	263	39	23	—5	7
	27	17	33	28	8	15	13	8	20	8	279	29	20	279	24	15	—5	5
	29	19	32	20	8	17	1	9	18	5	311	15	30	311	9	32	—5	58
	30	20	29	20	8	17	55	10	2	5	326	32	30	326	27	10	—5	20
	31	21	23	42	8	18	50	10	15	58	341	9	0	341	5	14	—3	46
Apri.					8	27	6	1	15	57	74	29	0	74	28	3	—0	57
Cent.	20	12	36	0	9	5	47	6	8	30	228	34	45	228	31	20	—3	25

Æ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
Apr.	24	16	28	0	9	9	21	8	2	57	290	40	30	290	37	43	-2	47
	25	17	27	51	9	10	15	8	16	58	306	40	0	306	36	44	-3	16
	29	21	0	20	9	13	48	10	11	57	003	53	15	003	48	53	-4	22
Maii.	7	2	40	35	9	19	58	1	8	3	96	4	30	96	2	8	-2	22
	8	3	31	2	9	20	52	1	19	32	109	42	30	109	40	33	-1	57
	11	5	53	52	9	23	31	2	23	48	148	28	0	148	27	20	-0	40
	12	6	38	15	9	24	24	3	5	22	160	34	50	160	34	38	-0	12
	13	7	21	41	9	25	16	3	17	4	172	27	15	172	26	36	-0	39
	14	8	4	57	9	26	9	3	29	0	184	17	0	184	16	10	-0	50
	15	8	48	57	9	27	2	4	11	13	196	18	5	196	16	57	-1	8
	16	9	34	45	9	27	54	4	23	45	208	46	0	208	44	50	-1	10
	17	10	23	24	9	28	47	5	6	37	221	57	10	221	54	23	-2	47
	21	14	17	20	10	2	20	7	1	28	284	32	0	284	32	9	+0	9
	24	17	16	12	10	4	59	8	14	2	332	19	30	332	19	0	-0	30
	28	20	32	50	10	8	30	10	7	46	25	34	0	25	31	15	-2	45
	29	21	19	24	10	9	22	10	20	21	38	13	30	38	11	15	-2	15
Junii.	8	4	33	40	10	17	15	2	4	17	155	57	30	155	55	20	-2	10
	9	5	16	51	10	18	8	2	15	45	167	46	0	167	45	06	-0	54
	11	6	41	57	10	19	53	3	9	23	191	4	20	191	3	33	-0	47
	12	7	25	45	10	20	45	3	21	40	203	2	40	203	1	23	-1	17
	13	8	11	53	10	21	37	4	4	19	215	35	40	215	33	55	-1	45
	14	9	1	30	10	22	30	4	17	23	229	0	50	228	58	25	-2	25
	15	9	55	30	10	23	23	5	0	51	243	32	0	243	29	5	-2	55
	16	10	55	18	10	24	16	5	14	43	259	31	0	259	29	14	-1	46
Ecl. ☾	17	13	48	36	10	25	13	6	0	0	☾ 6	49	0	☾ 6	48	35	-0	25
	18	13	3	24	10	26	2	6	13	21	293	35	50	293	36	23	+0	33
	19	14	6	42	10	26	55	6	27	51	310	27	20	310	27	46	+0	26
	21	16	2	52	10	28	41	7	26	35	341	32	40	341	32	24	-0	16
	23	17	44	8	11	0	26	8	24	17	08	54	0	8	53	13	-0	47
::	24	18	31	25	11	1	18	9	7	34	21	44	30	21	42	51	-1	39
::	26	20	4	45	11	3	3	10	2	57	47	6	30	47	4	37	-1	53
::	27	20	52	23	11	3	56	10	15	6	60	2	15	60	0	57	-1	18
::	28	21	41	16	11	4	49	10	26	55	73	16	30	73	15	20	-1	10

**LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	"	"
Julii.::8 4 38 10					II	12	42	2	8	22	186	39	30	186	39	25	—0	5
* 9 9 36 30					II	13	43	2	22	21	220	12	40	220	13	0	+0	20
10 6 4 20					II	14	26	3	2	30	210	14	0	210	13	40	—0	20
: : 12 7 41 10					II	16	12	3	28	13	236	29	0	236	27	35	—1	25
15 10 39 6					II	18	51	5	10	3	284	2	20	284	0	20	—2	0
Cent. 16 11 44 55					II	19	44	5	24	38	301	31	30	301	30	32	—0	58
: : 19 14 44 40					II	22	23	7	8	22	349	33	0	349	34	20	+1	20
: : 21 16 26 30					II	24	9	8	6	13	17	2	20	17	0	40	—1	40
22 17 14 36					II	25	0	8	19	36	30	3	0	30	1	20	—1	40
23 18 2 0					II	25	53	9	2	32	42	56	45	42	54	54	—1	51
24 18 49 50					II	26	47	9	15	2	55	55	45	55	54	5	—1	40
Aug. 7 4 45 50					0	8	15	2	13	53	218	9	0	218	10	9	+1	9
10 7 20 15					0	10	54	3	22	58	259	49	0	259	48	50	—0	10
11 8 20 5					0	11	48	4	6	52	275	48	0	275	46	43	—1	17
13 10 25 47					0	13	35	5	5	37	309	17	0	309	14	35	—2	25
Cent. 14 11 28 25					0	14	29	5	20	14	325	58	15	325	56	27	—1	48
Cent. 15 12 26 48					0	15	23	6	4	48	341	35	30	341	33	37	—1	53
17 14 15 7					0	17	10	7	3	21	10	43	0	10	41	24	—1	36
18 15 5 22					0	18	3	7	17	9	24	18	0	24	16	22	—1	38
20 16 43 53					0	19	50	8	13	32	50	58	0	50	55	34	—2	26
21 17 33 32					0	20	43	8	26	7	64	23	30	64	20	11	—3	19
26 21 42 4					0	25	11	10	24	24	131	38	0	131	38	43	+0	43
Sept.::4 7 30 25					I	2	28	1	27	41	228	42	20	228	43	55	+1	35
* 5 4 19 30					I	3	13	2	8	15	240	8	0	240	12	33	+4	33
8 7 8 42					I	5	55	3	18	24	285	30	20	285	31	31	+1	11
9 8 9 34					I	6	50	4	2	30	301	45	0	301	46	11	+1	11
11 10 8 21					I	8	38	5	1	8	333	29	45	333	27	17	—2	28
12 11 4 7					I	9	33	5	15	28	348	27	40	348	25	42	—1	58
Cent. 13 11 58 42					I	10	27	5	29	40	3	8	0	3	5	25	—2	35
15 13 42 10					I	12	15	6	27	17	31	2	30	30	59	56	—2	34
16 14 32 44					I	13	9	7	10	36	44	42	0	44	39	01	—2	59
17 15 23 38					I	14	4	7	23	33	58	26	50	58	23	18	—3	32
18 16 15 2					I	14	58	8	6	8	72	19	0	72	15	35	—3	25

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Transitus Limbi Lunæ T. æq.	Argument. Annuum.	Distantia ☾ à ☉	Ascens. Rect. Limbi Lunæ Observata.	Ascens. Rect. Limbi Lunæ Comput.	Error Comp.
M. D. H. / "	S. O. /	S. O. /	O. / "	O. / "	/ "
Octob. 5 5 2 7	1 29 29	2 16 36	280 23 7	280 28 58	+5 51
7 7 0 20	2 1 19	3 14 13	311 59 20	312 0 54	+1 34
8 7 57 27	2 2 14	3 28 15	327 17 50	327 17 52	—0 2
9 8 52 17	2 3 9	4 12 20	342 1 30	342 0 32	—0 58
10 9 44 53	2 4 4	4 26 20	356 12 0	356 10 55	—1 5
Cent. 11 10 37 7	2 4 58	5 10 12	10 16 35	10 15 25	—1 10
Cent. 12 11 27 29	2 5 54	5 23 48	23 53 20	23 51 48	—1 32
Cent. 13 12 17 56	2 6 49	6 7 9	37 31 25	37 29 45	—1 40
14 13 10 17	2 7 44	6 20 13	51 38 0	51 35 29	—2 31
15 14 2 23	2 8 39	7 1 58	65 40 40	65 37 56	—2 44
16 14 55 17	2 9 34	7 15 24	79 55 30	79 51 22	—4 8
17 15 48 11	2 10 29	7 27 33	94 10 20	94 5 40	—4 40
19 17 30 42	2 12 20	8 21 8	121 50 30	121 45 29	—5 1
20 18 18 57	2 13 15	9 2 40	134 55 20	134 50 57	—4 23
23 20 31 38	2 16 0	10 6 50	171 8 30	171 6 10	—2 20
24 21 13 43	2 16 55	10 18 17	182 40 40	182 38 0	—2 40
Nov. 2 3 56 34	2 24 18	1 28 27	291 33 10	291 36 44	+3 34
3 4 55 45	2 25 14	2 12 13	307 22 30	307 25 56	+3 26
5 6 47 14	2 27 5	3 10 0	337 17 30	337 18 46	+1 16
7 8 28 50	2 28 56	4 7 32	4 44 0	4 44 10	+0 10
9 10 6 38	3 0 48	5 4 17	31 13 20	31 13 14	—0 6
10 10 56 22	3 1 43	5 17 16	44 40 30	44 41 0	+0 30
Cent. 11 11 48 42	3 2 39	5 29 58	58 46 50	58 46 3	—0 47
13 13 35 55	3 4 31	6 24 33	87 37 30	87 34 59	—2 31
14 14 29 9	3 5 26	7 6 27	101 57 30	101 54 18	—3 12
16 16 11 5	3 7 18	7 29 43	129 28 45	129 24 45	—4 0
18 17 43 15	3 9 9	8 22 32	154 33 20	154 30 32	—2 48
19 18 26 8	3 10 5	9 3 56	166 17 45	166 15 57	—1 48
20 19 7 56	3 11 1	9 15 24	177 45 30	177 43 44	—1 46
Ecl. ☉ 27 2 7 25	3 16 40	0 0 0	116 17 43	116 17 30	—0 13
Dec. 2 4 43 51	3 21 16	2 7 35	332 58 30	333 0 12	+1 42
4 6 26 40	3 23 8	3 5 18	00 43 0	00 43 13	+0 13
7 8 50 46	3 25 56	4 15 8	39 48 0	39 46 46	—1 14
Cent. 10 11 24 37	3 28 44	5 22 17	81 19 30	81 19 8	—0 22

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
Cent.	11	12	17	46	3	29	40	6	4	7	95	38	0	95	36	55	—1	5
Dec.	13	14	2	41	4	1	32	6	27	10	123	54	30	123	51	40	—2	50
	15	15	37	24	4	3	24	7	19	43	149	37	20	149	35	7	—2	13
	17	17	3	0	4	5	16	8	12	14	173	3	0	173	1	18	—1	42
	18	17	44	0	4	6	11	8	23	38	184	19	0	184	17	22	—1	38
	20	19	7	19	4	8	3	9	17	5	207	10	30	207	8	44	—1	46
	21	19	51	54	4	8	59	9	29	15	219	20	0	219	18	37	—1	23
	22	20	39	58	4	9	55	10	11	46	232	22	0	232	19	56	—2	4
Dec.	31	4	22	38	4	17	25	2	2	25	356	14	20	356	15	0	+0	40
*	31	6	13	20	4	17	29	2	3	28	357	31	25	357	32	47	+1	22

Anno JULIANO MDCCXXIII. Currente.

Jan.	2	6	0	48	4	19	17	2	29	54	22	49	0	22	47	50	—1	10
	6	9	18	9	4	23	1	4	20	46	76	14	0	76	11	57	—2	3
	7	10	10	17	4	23	57	5	2	39	90	17	20	90	16	13	—1	7
Cent.	10	12	44	36	4	26	44	6	6	50	131	55	45	131	53	26	—2	19
	11	13	32	40	4	27	40	6	17	56	144	58	0	144	55	43	—2	17
	12	14	17	13	4	28	36	6	28	58	157	7	0	157	3	33	—3	27
	13	14	59	40	4	29	32	7	10	0	168	44	30	168	42	26	—2	4
	14	15	40	44	5	0	27	7	21	8	180	1	30	179	59	30	—2	0
Jan.	16	17	2	11	5	2	18	8	13	54	202	25	0	202	24	4	—0	56
Feb. ::	7	11	27	22	5	21	47	5	17	9	140	10	0	140	8	57	—1	3
	9	12	57	47	5	23	38	6	9	13	164	48	15	164	45	50	—2	25
::	10	13	39	10	5	24	33	6	19	59	176	10	0	176	7	20	—2	40
	11	14	19	51	5	25	28	7	1	0	187	21	0	187	17	19	—3	41
	12	15	0	21	5	26	23	7	12	11	198	29	20	198	26	34	—2	46
	13	15	41	50	5	27	17	7	23	36	209	52	20	209	49	53	—2	27
	17	18	55	30	6	0	58	9	12	47	262	21	40	262	20	14	—1	26
Feb. * 26	7	32	13		6	8	31	1	9	9	27	33	30	27	35	0	+1	30
Mart. :: 1	5	8	23		6	11	5	2	16	46	66	50	50	66	48	19	—2	31
	2	6	1	23	6	11	59	2	29	27	81	7	0	81	4	4	—2	56
	3	6	54	22	6	12	54	3	11	43	95	23	0	95	19	47	—3	13

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Transitus Limbi Lunæ T. æq.				Argument. Annuum.	Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.	Ascens. Rect. Limbi Lunæ Comput.	Error Comp.
M.	D.	H.	' "	s. o. '	s. o. '			q. ' "	q. ' "	' "
Mart.	4	7	46 28	6 13 49	3 23 38			109 26 0	109 22 53	—3 7
	6	9	25 2	6 15 38	4 16 35			136 6 50	136 5 12	—1 38
	7	10	10 47	6 16 33	4 27 43			148 34 0	148 32 20	—1 40
	8	10	54 21	6 17 27	5 8 45			160 28 30	160 27 2	—1 38
	11	12	59 41	6 20 10	6 11 45			194 51 0	194 47 44	—3 16
	12	13	40 55	6 21 4	6 22 58			206 10 20	206 6 52	—3 28
	13	14	23 38	6 21 58	7 4 23			217 52 0	217 48 50	—3 10
	14	15	8 51	6 22 52	7 16 7			230 11 10	230 7 2	—4 8
	15	15	57 6	6 23 47	7 28 11			243 16 10	243 12 27	—3 43
	16	16	48 57	6 24 41	8 10 55			257 15 0	257 11 38	—3 22
	17	17	44 18	6 25 36	8 23 33			272 6 50	272 3 12	—3 38
	18	18	42 21	6 26 30	9 6 52			287 39 0	287 34 44	—4 16
	19	19	41 36	6 27 25	9 20 35			303 29 15	303 24 25	—4 50
	20	20	40 27	6 28 19	10 4 37			319 13 40	319 8 32	—5 8
	21	21	37 42	6 29 14	10 18 54			334 34 0	334 29 21	—4 39
	22	22	32 55	7 0 8	11 3 19			349 23 30	349 18 24	—5 6
Mar.	27	2	1 49	7 3 45	1 0 0			45 42 15	45 42 35	+0 20
	29	3	50 26	7 5 33	1 26 38			74 54 10	74 53 21	—0 49
Apri.	1	6	31 30	7 8 15	3 3 45			118 14 15	118 12 18	—1 57
	2	7	21 6	7 9 9	3 15 28			131 39 15	131 37 49	—1 28
	4	8	52 10	7 10 56	4 8 13			156 27 20	156 26 45	—0 35
	6	10	15 32	7 12 43	5 0 31			179 19 40	179 19 38	—0 2
	7	10	56 10	7 13 37	5 11 40			190 30 0	190 28 57	—1 3
	8	11	37 15	7 14 30	5 22 54			201 47 0	201 45 15	—1 45
Cent.	9	12	20 43	7 15 24	6 4 17			213 40 0	213 37 43	—2 17
	10	13	6 31	7 16 17	6 15 55			226 8 0	226 4 40	—3 20
	12	14	45 20	7 18 4	7 10 1			252 52 20	252 48 45	—3 35
	14	16	36 44	7 19 52	8 5 33			282 46 30	282 42 29	—4 1
	16	18	32 25	7 21 40	9 2 31			313 44 45	313 40 11	—4 34
	18	20	22 26	7 23 26	10 0 30			343 17 45	343 11 57	—5 48
	19	21	14 41	7 24 20	10 14 41			357 22 45	357 16 50	—5 55
	26	2	31 25	7 29 40	1 6 42			82 41 30	82 40 24	—1 6
Apri.	29	5	13 41	8 2 20	2 13 44			126 19 45	126 19 44	—0 1
Maii.	1	6	48 4	8 4 7	3 7 4			151 57 40	151 57 48	+0 8

**LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	"	"
<i>Maii.</i>					8	4	59	3	18	29	163	45	20	163	46	01	+0	41
	2	7	31	11														
	3	8	12	34	8	5	52	3	29	49	175	6	45	175	8	2	+1	17
	4	8	53	10	8	6	45	4	11	9	186	16	30	186	17	22	+0	52
	5	9	33	48	8	7	38	4	22	31	197	27	0	197	28	43	+1	43
	6	10	15	44	8	8	30	5	4	0	208	56	45	208	57	5	+0	20
	7	10	59	45	8	9	23	5	15	40	220	58	0	220	57	12	—0	48
	9	12	39	41	8	11	9	6	9	47	247	59	30	247	56	55	—2	35
	10	13	34	2	8	12	2	6	22	17	262	36	0	262	32	58	—3	2
	26	3	3	17	8	25	17	1	12	2	120	15	0	120	14	54	—0	6
	28	4	41	44	8	27	2	2	5	37	146	54	0	146	54	20	+0	20
<i>Maii.</i>					8	29	40	3	10	1	181	46	30	181	47	40	+1	10
<i>Junii.</i>					9	0	32	3	21	29	192	51	30	192	53	14	+1	44
	1	7	29	20														
	2	8	10	20	9	1	24	4	3	3	204	7	15	204	8	48	+1	33
	3	8	53	3	9	2	17	4	14	47	215	49	0	215	50	39	+1	39
	5	10	27	56	9	4	2	5	8	58	241	34	20	241	34	28	+0	8
<i>Cent.</i>					9	4	55	5	21	31	256	14	50	256	14	32	—0	18
<i>Cent.</i>					9	5	47	6	4	24	271	35	0	271	34	30	—0	30
	6	11	22	32														
	8	13	20	44	9	6	40	6	17	36	287	51	0	287	49	59	—1	1
<i>Cent.::</i>					9	7	33	7	1	5	303	34	15	303	33	23	—0	52
	9	14	19	31														
	10	15	19	9	9	8	26	7	14	49	319	30	20	319	28	42	—1	38
	11	16	14	38	9	9	19	7	28	42	334	24	0	334	21	58	—2	2
	13	17	57	16	9	11	4	8	26	38	02	6	0	02	1	51	—4	9
	15	19	34	45	9	12	49	9	24	14	28	30	30	28	26	7	—4	23
	18	22	9	34	9	15	28	11	4	0	70	16	40	70	13	50	—2	50
	28	5	24	58	9	23	21	2	20	15	188	17	45	188	18	58	+1	13
	29	6	5	8	9	24	13	3	1	44	199	21	0	199	23	5	+2	5
<i>Junii.</i>					9	25	5	3	13	23	210	42	0	210	44	5	+2	5
<i>Julii.</i>					9	25	57	3	25	15	222	36	45	222	38	56	+2	11
	1	7	30	4														
	2	8	17	3	9	26	50	4	7	24	235	22	30	235	23	50	+1	20
	4	10	3	46	9	28	35	5	2	43	264	6	0	264	5	20	—0	40
	5	11	3	0	9	29	28	5	15	56	279	56	0	279	55	14	—0	46
<i>Cent.</i>					10	1	15	6	13	20	312	47	0	312	46	13	—0	47
	7	13	6	10														
	10	15	53	12	10	3	53	7	25	42	357	36	40	357	35	54	—0	46
	11	16	43	22	10	4	46	8	9	48	11	10	0	11	8	14	—1	46

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	o.	'	S.	o.	'	o.	'	"	o.	'	"	'	"
Julii.					10	6	31	9	7	26	37	50	30	37	47	47	-2	43
					10	7	24	9	20	50	51	31	0	51	27	2	-3	58
					10	9	10	10	16	42	80	6	30	80	4	43	-1	47
					10	10	3	10	29	6	94	49	30	94	48	30	-1	0
					10	14	27	0	27	11	161	26	30	161	28	0	+1	30
::					10	16	12	1	19	31	184	2	0	184	2	54	+0	54
					10	17	4	2	0	46	195	0	0	195	1	32	+1	32
Julii.					10	20	35	3	17	49	242	47	0	242	49	15	+2	15
Aug.					10	22	22	4	13	24	272	7	0	272	6	15	-0	45
					10	24	8	5	10	36	304	28	40	304	26	7	-2	33
					10	25	55	6	9	1	336	44	15	336	41	54	-2	21
					10	26	49	6	23	26	351	32	0	351	29	55	-2	5
					10	27	42	7	7	51	5	43	0	5	41	17	-1	43
					10	28	35	7	22	8	19	31	45	19	29	47	-1	58
::					10	29	28	8	6	13	33	12	0	33	11	44	-0	16
					11	1	15	9	3	26	61	13	40	61	10	14	-3	26
					11	3	55	10	11	27	104	56	30	104	55	37	-0	53
					11	12	47	2	4	24	225	4	30	225	8	42	+4	12
					11	13	41	2	16	11	237	33	0	237	36	56	+3	56
					11	14	34	2	28	20	250	56	0	250	59	28	+3	28
					11	15	28	3	10	53	265	18	30	265	21	40	+3	10
					11	16	22	3	23	53	280	34	10	280	34	44	+0	34
					11	17	16	4	7	19	296	24	30	296	23	12	-1	18
Aug.					11	18	10	4	21	9	312	23	30	312	20	0	-3	30
Sept.					11	19	4	5	5	19	328	6	0	328	1	32	-4	28
Cent.					11	19	58	5	19	45	343	35	30	343	30	54	-4	36
Cent.					11	20	52	6	4	17	358	15	15	358	11	7	-4	8
					11	21	46	6	18	51	12	50	20	12	47	8	-3	12
					11	23	34	7	17	30	41	15	0	41	12	36	-2	24
					11	24	28	8	1	24	55	46	0	55	42	55	-3	5
					11	25	22	8	14	56	70	34	0	70	30	26	-3	34
					11	27	11	9	10	45	100	23	30	100	20	15	-3	15
					11	28	5	9	23	2	114	52	0	114	49	37	-2	23
					11	28	59	10	4	56	128	42	0	128	40	59	-1	1

**LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXIII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.		
M.	D.	H.	'	''	S.	O.	'	S.	O.	'	O.	'	''	O.	'	''	'	''	
Sept.	13	21	12	42	11	29	53	10	16	30	141	46	15	141	46	54	+0	39	
::	14	21	57	55	0	0	47	10	27	49	154	5	30	154	7	51	+2	21	
::	20	1	19	47	0	5	16	0	22	46	209	37	30	209	40	53	+3	23	
	23	3	34	11	0	7	58	1	27	5	246	16	30	246	21	20	+4	50	
	24	4	25	20	0	8	53	2	9	9	260	5	0	260	9	39	+4	39	
	25	5	19	41	0	9	47	2	21	38	274	41	30	274	45	38	+4	8	
	26	6	16	21	0	10	42	3	4	32	289	53	0	289	56	0	+3	0	
	27	7	14	3	0	11	37	3	17	52	305	20	0	305	20	19	+0	19	
::	28	8	11	17	0	12	32	4	1	35	320	40	0	320	38	16	-1	44	
	29	9	7	13	0	13	26	4	15	39	335	40	20	335	36	7	-4	13	
Sept.	30	10	1	30	0	14	21	4	29	58	350	16	0	350	11	34	-4	26	
Octo.	1	10	54	38	0	15	16	5	14	25	4	34	30	4	29	31	-4	59	
Cent.	2	11	48	40	0	16	11	5	28	56	19	6	15	19	1	32	-4	43	
Cent.::	3	12	42	13	0	17	6	6	13	21	::	33	31	0	33	25	42	-5	18
	4	13	38	12	0	18	0	6	27	36	48	32	0	48	28	15	-3	45	
::	5	14	34	50	0	18	56	7	11	32	63	43	0	63	38	52	-4	8	
	6	15	32	21	0	19	51	7	25	7	79	9	40	79	5	37	-4	3	
::	7	16	30	10	0	20	46	8	8	18	94	36	0	94	32	18	-3	42	
::	8	17	26	20	0	21	41	8	21	3	109	40	0	109	36	26	-3	34	
	9	18	19	45	0	22	36	9	3	23	124	2	30	123	58	50	-3	40	
	10	19	9	40	0	23	30	9	15	21	137	32	30	137	29	34	-2	56	
	12	20	39	36	0	25	20	10	8	21	162	03	30	162	3	10	-0	20	
	13	21	20	55	0	26	15	10	19	31	173	24	0	173	25	0	+1	0	
	14	22	0	58	0	27	9	11	0	34	184	25	30	184	26	57	+1	27	
Octo.	21	2	21	52	1	2	38	1	8	8	255	44	40	255	48	0	+3	20	
	22	3	15	10	1	3	34	1	20	14	270	5	30	270	9	29	+4	0	
	24	5	7	0	1	5	25	2	15	33	300	5	50	300	9	11	+3	21	
	25	6	2	51	1	6	20	2	28	46	315	5	0	315	6	21	+1	21	
::	26	6	57	3	1	7	16	3	12	19	329	39	30	329	40	21	+0	51	
::	27	7	49	56	1	8	11	3	26	12	343	54	0	343	51	36	-2	24	
::	28	8	41	2	1	9	6	4	10	17	357	46	0	357	43	30	-2	30	
	29	9	32	27	1	10	2	4	24	31	11	34	30	11	30	43	-3	47	
	30	10	24	19	1	10	57	5	8	47	25	33	30	25	29	26	-4	4	
Cent.	31	11	19	2	1	11	53	5	23	0	40	15	30	40	11	56	-3	34	

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
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CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	"	"
Cent.	1	12	15	0	1	12	48	6	7	3	55	16	15	55	12	43	—3	32
Cent.	2	13	13	11	1	13	44	6	20	51	70	50	50	70	47	40	—3	10
Nov.	3	14	13	56	1	14	40	7	4	20	87	3	10	86	59	26	—3	44
	4	15	12	51	1	15	36	7	17	27	102	49	0	102	45	58	—3	2
	6	17	2	17	1	17	27	8	12	32	132	13	15	132	9	30	—3	45
	7	17	51	3	1	18	23	8	24	32	145	26	0	145	23	14	—2	46
	8	18	36	11	1	19	18	9	6	14	157	44	0	157	42	1	—1	59
	9	19	18	27	1	20	14	9	17	42	169	19	0	169	18	5	—0	55
	13	21	59	43	1	23	55	11	2	34	213	41	0	213	41	42	+0	42
	20	3	2	50	1	29	29	1	13	52	295	34	20	295	35	15	+0	55
	24	6	35	31	2	3	13	3	7	12	352	50	30	352	48	40	—1	50
	25	7	24	46	2	4	9	3	21	7	06	10	30	6	9	9	—1	21
	26	8	14	8	2	5	5	4	5	6	19	32	0	19	30	19	—1	41
::	28	9	58	3	2	6	57	5	2	56	47	33	20	47	31	0	—2	20
Cent.	29	10	55	15	2	7	53	5	16	40	62	53	0	62	51	56	—1	4
Cent.	30	11	53	53	2	8	49	6	0	10	78	34	0	78	33	29	—0	31
Cent.	1	12	53	45	2	9	46	6	13	22	94	33	35	94	32	13	—1	22
Dec.	2	13	53	50	2	10	42	6	26	15	110	36	15	110	34	50	—1	25
	3	14	49	43	2	11	38	7	8	47	125	36	0	125	34	30	—1	30
	5	16	29	15	2	13	30	8	2	55	152	31	15	152	29	43	—1	32
	6	17	13	22	2	14	26	8	14	36	164	34	0	164	32	33	—1	27
	7	17	54	54	2	15	22	8	26	6	175	58	0	175	56	16	—1	44
	8	18	34	55	2	16	17	9	7	30	186	59	0	186	57	25	—1	35
	9	19	14	32	2	17	13	9	18	49	197	54	0	197	53	0	—1	0
	11	20	37	7	2	19	4	10	11	34	220	34	30	220	33	13	—1	17
	24	6	59	42	3	0	17	3	16	16	28	28	30	28	27	26	—1	4
	26	8	43	34	3	2	10	4	13	36	56	29	0	56	26	25	—2	35
	27	9	39	30	3	3	6	4	26	53	71	29	30	71	28	27	—1	3
Dec.	28	10	37	41	3	4	2	5	10	7	87	3	40	87	3	3	—0	37
Cent.	30	12	34	46	3	5	55	6	5	30	118	23	20	118	23	19	—0	1

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Jan. 6 17 49 40 | 3 12 25 | 8 26 58 | 204 13 20 | 204 12 36 | —0 44

**LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXIV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☼			Ascens. Rect. Limbi Lunæ Observata.	Ascens. Rect. Limbi Lunæ Comput.	Error Comp.							
M.	D.	H.	'	"	S.	O.	'	"	O.	'	"	'	"					
Jan.	17	2	27	6	3	21	44	1	2	4	343	47	40	343	46	26	—1	14
	21	5	47	26	3	25	27	2	27	42	37	57	20	37	55	40	—1	40
	22	6	39	25	3	26	23	3	11	24	51	58	30	51	55	45	—2	45
	24	8	29	54	3	28	15	4	8	1	81	38	20	81	37	49	—0	31
	25	9	27	24	3	29	11	4	20	53	97	2	20	97	1	1	—1	19
	26	10	24	8	4	0	7	5	3	25	112	15	0	112	14	33	—0	27
Cent.	27	11	19	44	4	1	3	5	15	38	127	10	30	127	11	7	+0	37
Cent.	28	12	10	50	4	1	58	5	27	32	140	58	20	140	58	28	+0	8
	30	13	43	40	4	3	50	6	20	36	166	12	0	166	11	26	—0	34
Jan.	31	14	25	22	4	4	45	7	1	51	177	39	0	177	38	18	—0	42
Feb.	2	15	45	24	4	6	35	7	24	16	199	41	5	199	39	15	—1	15
	3	16	25	43	4	7	30	8	5	30	210	46	45	210	45	37	—1	8
	4	17	7	34	4	8	25	8	16	52	222	15	0	222	14	14	—0	46
	7	19	31	11	4	11	11	9	22	20	261	13	0	261	11	27	—1	33
	15	1	58	56	4	17	39	0	26	30	05	19	0	5	19	9	+0	9
	16	2	50	9	4	18	35	1	10	45	19	8	30	19	8	51	+0	21
	18	4	34	35	4	20	25	2	9	0	47	17	30	47	16	8	—1	22
	19	5	29	13	4	21	20	2	22	47	61	58	30	61	56	18	—2	12
	20	6	25	37	4	22	15	3	6	16	77	5	45	77	2	40	—3	5
::	21	7	22	48	4	23	11	3	19	24	92	25	0	92	22	32	—2	28
	22	8	19	30	4	24	6	4	2	9	107	37	0	107	34	15	—2	45
	23	9	14	4	4	25	1	4	14	31	122	17	0	122	15	29	—1	31
	24	10	5	31	4	25	56	4	26	31	136	10	0	136	9	0	—1	0
	25	10	53	29	4	26	51	5	8	12	149	10	30	149	10	22	—0	8
	26	11	38	18	4	27	46	5	19	37	161	23	40	161	23	14	—0	26
Feb.	28	13	3	9	4	29	35	6	11	55	184	38	10	184	36	47	—1	23
Mart.	3	15	47	8	5	3	12	7	26	18	229	41	20	229	38	5	—3	15
	6	18	14	34	5	5	56	9	1	36	269	36	20	269	32	38	—3	42
	8	20	6	21	5	7	46	9	26	57	299	36	0	299	31	38	—4	22
	9	21	3	6	5	8	41	10	10	15	314	49	0	314	44	36	—4	24
::	17	3	18	55	5	15	2	1	19	50	55	55	20	55	58	6	+2	46
	18	4	16	56	5	15	57	2	3	49	71	27	0	71	28	21	+1	21
::	20	6	14	17	5	17	46	3	0	39	102	50	30	102	49	12	—1	18
	21	7	10	20	5	18	40	3	13	26	117	52	30	117	51	13	—1	17

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Anno JULIANO MDCCXXIV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.			
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"		
Mart.	22	8	2	58	5	19	35	3	25	46	132	3	30	132	1	47	—1	43		
	23	8	51	50	5	20	29	4	7	44	145	17	30	145	17	5	—0	25		
	24	9	37	10	5	21	23	4	19	21	157	38	30	157	38	43	+0	13		
Cent.	27	11	41	5	5	24	4	5	22	50	191	39	45	191	39	21	—0	24		
	29	13	2	27	5	25	51	6	14	43	214	2	0	213	58	32	—3	28		
	30	13	44	50	5	26	45	6	25	44	225	38	30	225	34	0	—4	30		
Mart.	31	14	29	42	5	27	38	7	6	55	237	52	30	237	47	5	—5	25		
Apri.	1	15	17	30	5	28	32	7	18	19	250	50	30	250	44	46	—5	44		
	5	18	51	36	6	2	7	9	7	17	308	27	30	308	21	12	—6	18		
	14	2	0	45	6	9	18	1	0	23	63	55	20	63	57	25	+2	5		
	15	3	1	38	6	10	12	1	14	29	80	10	20	80	13	0	+2	40		
::	18	5	57	26	6	12	53	2	24	23	127	12	0	127	13	46	+1	46		
	20	7	35	28	6	14	40	3	18	50	153	44	50	153	46	18	+1	28		
	21	8	18	59	6	15	33	4	0	31	165	38	30	165	39	55	+1	25		
::	22	9	0	3	6	16	26	4	11	55	176	55	20	176	57	13	+1	53		
	24	10	19	16	6	18	12	5	4	9	198	45	0	198	45	45	+0	45		
	25	10	59	25	6	19	5	5	15	9	209	48	0	209	47	25	—0	35		
Cent.	27	12	26	20	6	20	51	6	7	14	233	33	30	233	29	58	—3	32		
Cent.	28	13	13	22	6	21	44	6	18	28	246	20	15	246	15	14	—5	1		
	29	14	4	34	6	22	37	6	29	55	260	9	30	260	3	49	—5	41		
April.	30	14	57	15	6	23	30	7	11	38	274	21	0	274	14	40	—6	20		
Maii.	2	16	45	53	6	25	17	8	6	5	303	33	20	303	26	36	—6	44		
	4	18	31	19	6	27	3	9	2	2	331	57	30	331	50	17	—7	13		
::	6	20	11	27	6	28	49	9	29	27	359	1	40	358	54	11	—7	29		
	7	21	1	15	6	29	42	10	13	36	12	30	0	12	23	2	—6	58		
	11	5	11	22	7	2	33	0	0	0	II	1	37	3	II	1	36	21	—0	42
	14	2	46	33	7	5	1	1	8	50	104	58	30	105	1	2	+2	32		
	15	3	45	42	7	5	54	1	22	9	120	47	20	120	51	2	+3	42		
	16	4	40	19	7	6	47	2	5	1	135	28	15	135	31	35	+3	20		
	17	5	30	10	7	7	40	2	17	29	148	57	0	148	59	39	+2	39		
	19	6	58	6	7	9	26	3	11	20	172	57	50	173	0	20	+2	30		
	21	8	18	0	7	11	10	4	4	10	194	57	45	194	59	45	+2	0		
	22	8	57	45	7	12	3	4	15	22	205	54	50	205	56	57	+2	7		
	23	9	38	50	7	12	55	4	26	32	217	12	0	217	13	7	+1	7		

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.	Ascens. Rect. Limbi Lunæ Comput.	Error Comp.							
M.	D.	H.	'	"	S.	o.	'	S.	o.	'	o.	'	"	o.	'	"	'	"
Maii.	25	11	9	29	7	14	40	5	18	59	241	53	40	241	51	47	-1	53
Cent.	26	11	58	58	7	15	33	6	0	24	255	17	0	255	13	52	-3	8
	27	12	51	22	7	16	26	6	12	2	269	24	30	269	20	18	-4	12
	28	13	46	59	7	17	19	6	23	56	284	20	0	284	14	51	-5	9
	29	14	41	55	7	18	12	7	6	7	299	5	20	298	59	40	-5	40
Maii.	30	15	35	54	7	19	4	7	18	37	313	36	30	313	30	45	-5	45
Junii.	1	17	18	10	7	20	50	8	14	38	341	13	0	341	7	31	-5	29
	2	18	6	47	7	21	42	8	28	6	354	23	30	354	16	41	-6	49
	4	19	43	42	7	23	28	9	25	52	20	39	30	20	32	10	-7	20
	6	21	28	38	7	25	13	10	24	14	48	56	00	48	49	58	-6	2
	7	22	26	29	7	26	6	11	8	24	64	25	15	64	21	0	-4	15
	13	3	20	15	8	0	31	1	15	33	142	59	30	143	2	25	+2	55
	16	5	34	53	8	3	8	2	21	47	179	42	0	179	43	37	+1	37
	17	6	15	0	8	4	0	3	3	22	190	44	15	190	46	11	+1	56
	19	7	35	14	8	5	45	3	26	10	212	49	30	212	51	35	+3	5
	20	8	17	32	8	6	37	4	7	31	224	25	0	224	27	9	+2	9
	21	9	2	38	8	7	29	4	18	55	236	42	20	236	43	10	+0	50
	23	10	42	42	8	9	14	5	12	7	263	45	45	263	44	29	-1	16
Cent.	24	11	38	17	8	10	7	5	24	3	278	41	0	278	38	53	-2	7
Cent.	25	12	34	0	8	11	0	6	6	13	293	38	0	293	34	54	-3	6
::	26	13	30	34	8	11	53	6	18	40	308	48	0	308	44	34	-3	26
	27	14	24	12	8	12	46	7	1	24	323	13	50	323	9	18	-4	32
	29	16	4	40	8	14	31	7	27	45	350	23	30	350	19	32	-3	58
Jun.::	30	16	52	40	8	15	23	8	11	19	3	24	30	3	21	36	-2	54
Julii.	2	18	29	33	8	17	9	9	8	59	29	40	0	29	34	2	-5	58
	3	19	21	0	8	18	1	9	22	58	43	33	0	43	26	55	-6	5
	4	20	15	48	8	18	54	10	6	57	58	16	30	58	10	8	-6	22
	13	3	29	15	8	25	57	1	20	22	174	49	0	174	49	16	+0	16
	14	4	10	20	8	26	49	2	2	3	186	6	0	186	7	8	+1	8
	16	5	30	42	8	28	34	2	25	2	208	13	20	208	14	41	+1	21
	23	11	17	56	9	4	44	5	17	55	302	10	0	302	7	22	-2	38
Cent.	24	12	14	28	9	5	37	6	0	42	317	19	30	317	15	55	-3	35
	26	14	0	1	9	7	23	6	27	6	345	45	20	345	42	30	-2	50
	27	14	49	21	9	8	16	7	10	40	359	6	30	359	4	16	-2	14

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	"	"
Julii.	28	15	38	0	9	9	9	7	24	27	12	17	0	12	14	39	-2	21
Aug.	2	20	6	12	9	13	35	10	3	45	84	27	0	84	23	26	-3	34
	3	21	6	10	9	14	28	10	17	10	100	28	0	100	25	48	-2	12
	11	2	45	58	9	20	40	1	12	26	192	33	0	192	33	34	+0	34
	17	7	14	24	9	25	58	3	21	26	265	45	30	265	45	48	+0	18
	18	8	8	30	9	26	52	4	3	33	280	18	15	280	17	20	-0	55
	19	9	4	10	9	27	46	4	15	58	295	14	30	295	12	7	-2	23
	20	9	59	52	9	28	39	4	28	43	310	11	30	310	8	12	-3	18
	21	10	54	26	9	29	33	5	11	47	324	51	30	324	47	27	-4	3
Cent.	22	11	48	25	10	0	26	5	25	10	339	22	30	339	18	11	-4	19
	24	13	30	50	10	2	14	6	22	44	7	1	20	6	58	17	-3	3
	26	15	12	27	10	4	1	7	20	57	34	28	0	34	27	26	-0	34
	27	16	6	6	10	4	55	8	5	5	48	54	15	48	52	24	-1	51
	29	18	1	0	10	6	42	9	2	58	79	40	30	79	38	28	-2	2
Aug.	30	19	0	41	10	7	36	9	16	32	95	37	30	95	36	55	-0	35
Sept.	1	20	55	36	10	9	24	10	12	36	126	24	0	126	24	40	+0	40
	2	21	47	56	10	10	18	10	25	4	140	30	30	140	32	41	+2	11
	10	2	45	22	10	16	34	1	15	20	221	58	0	221	59	50	+1	50
	15	6	51	18	10	21	4	3	13	22	288	33	0	288	33	20	+0	20
	17	8	40	0	10	22	53	4	8	41	317	46	30	317	42	49	-3	41
	18	9	32	55	10	23	47	4	21	53	332	1	20	331	56	30	-4	50
Cent.	20	11	16	30	10	25	36	5	19	22	359	57	40	359	52	47	-4	53
	22	13	0	49	10	27	25	6	17	53	28	5	0	28	1	52	-3	8
	23	13	55	18	10	28	20	7	2	18	42	43	30	42	41	22	-2	8
	24	14	52	38	10	29	14	7	16	41	58	5	0	58	3	31	-1	29
	26	16	53	49	11	1	4	8	14	51	90	26	0	90	24	31	-1	29
	27	17	54	17	11	1	59	8	28	27	106	34	40	106	32	55	-1	45
Sept.	28	18	51	53	11	2	54	9	11	38	122	0	10	121	58	32	-1	38
Octo.	1	21	20	2	11	5	38	10	18	40	162	6	0	162	7	48	+1	48
	8	1	26	0	11	11	4	0	25	44	229	40	0	229	41	50	+1	50
	13	5	36	6	11	15	39	2	23	8	297	17	45	297	19	16	+1	21
	14	6	28	50	11	16	34	3	5	31	311	30	0	311	30	51	+0	51
	15	7	20	36	11	17	29	3	18	18	325	28	0	325	26	10	-2	0
	17	9	0	49	11	19	19	4	15	4	352	33	30	352	29	22	-4	8

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	o.	'	S.	o.	'	o.	'	"	o.	'	"	'	"
Octo.	18	9	50	40	11	20	14	4	29	1	6	2	30	5	57	29	—5	1
	19	10	41	46	11	21	9	5	13	15	19	50	20	19	45	11	—5	9
	21	12	34	51	11	23	0	6	12	20	50	9	45	50	6	17	—3	28
	22	13	35	35	11	23	55	6	26	53	66	22	0	66	20	28	—1	32
	26	17	40	17	11	27	38	8	22	18	131	39	0	131	37	38	—1	22
	27	18	31	52	11	28	34	9	5	5	145	34	0	145	32	6	—1	54
	30	20	43	20	0	1	19	10	10	56	181	29	0	181	28	50	—0	10
Octo.	31	21	23	12	0	2	14	10	22	14	192	27	45	192	27	37	—0	8
Nov.	1	22	3	0	0	3	9	11	3	22	203	25	30	203	26	11	+0	41
	8	2	38	23	0	8	42	1	9	42	278	22	30	278	22	42	+0	12
	12	6	3	18	0	12	24	2	28	10	333	41	0	333	41	22	+0	22
	15	8	27	22	0	15	12	4	8	31	12	45	30	12	43	26	—2	4
	16	9	18	0	0	16	7	4	22	40	26	26	15	26	23	1	—3	14
	17	10	12	6	0	17	3	5	7	4	40	59	0	40	55	51	—3	9
	21	14	26	16	0	20	48	7	4	39	108	38	30	108	38	24	—0	6
	22	15	27	27	0	21	45	7	18	22	124	57	50	124	57	5	—0	45
	24	17	13	37	0	23	36	8	14	30	153	32	30	153	29	55	—2	35
	25	17	59	19	0	24	32	8	26	53	165	59	30	165	56	27	—3	3
	27	19	22	16	0	26	24	9	20	35	188	45	30	188	42	24	—3	6
Nov.	28	20	2	3	0	27	19	10	2	0	199	43	0	199	40	37	—2	23
Dec.	10	4	47	56	1	7	34	2	8	37	342	23	30	342	24	0	+0	30
	11	5	34	16	1	8	30	2	21	36	354	59	20	355	0	19	+0	59
	16	9	51	42	1	13	10	5	1	4	64	27	15	64	26	45	—0	30
Cent.	18	12	1	47	1	15	3	5	29	34	99	2	0	99	3	1	+1	1
	19	13	7	13	1	16	0	6	13	31	116	25	15	116	27	5	+1	50
	20	14	7	11	1	16	56	6	27	6	132	26	15	132	27	25	+1	10
	21	15	1	43	1	17	52	7	10	17	147	5	30	147	4	54	—0	36
	22	15	50	55	1	18	49	7	23	4	160	25	0	160	24	10	—0	50
	23	16	36	0	1	19	44	8	5	28	172	42	20	172	39	43	—2	37
	24	17	18	16	1	20	40	8	17	31	184	17	20	184	13	22	—3	58
	26	18	39	17	1	22	31	9	10	49	206	34	0	206	29	47	—4	13
	27	19	20	35	1	23	27	9	22	11	217	54	15	217	50	3	—4	12

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Transitus Limbi Luna T. æq.					Argument. Annuum.	Distantia ☾ à ☉			Ascens. Rect. Limbi Luna Observata.	Ascens. Rect. Limbi Luna Comput.	Error Comp.		
M.	D.	H.	'	"	S.	o.	'	"	o.	'	"	'	"
Jan.	6	2	45	56	2	1	51	1	6	49	338 25 0	338 23 44	—1 16
	10	5	53	15	2	5	34	2	29	34	29 19 0	29 19 24	+0 24
	11	6	44	20	2	6	30	3	13	24	43 6 30	43 6 33	+0 3
	12	7	39	30	2	7	26	3	27	24	57 55 15	57 55 3	—0 12
Cent.::	13	8	40	17	2	8	22	4	11	28	74 9 0	74 8 20	—0 40
	14	9	41	47	2	9	18	4	25	27	90 33 0	90 33 17	+0 17
	15	10	45	24	2	10	15	5	9	18	107 29 0	107 30 1	+1 1
	16	11	46	54	2	11	11	5	22	53	123 53 15	123 54 45	+1 30
	18	13	38	39	2	13	3	6	19	5	153 52 20	153 53 20	+1 0
	19	14	26	19	2	13	59	7	1	40	166 48 30	166 48 40	+0 10
::	20	15	10	40	2	14	54	7	13	54	178 54 45	178 52 35	—2 10
	23	17	15	16	2	17	40	8	19	10	213 6 20	213 2 43	—3 37
	24	17	57	58	2	18	36	9	0	37	224 47 30	224 43 3	—4 27
::	27	20	20	20	2	21	22	10	4	53	263 26 30	263 23 3	—3 27
Jan.	28	21	12	52	2	22	18	10	16	28	277 35 45	277 31 26	—4 19
Feb.	5	3	2	47	2	28	46	1	13	53	12 12 50	12 12 33	—0 17
::	6	3	50	48	2	29	42	1	27	26	25 14 0	25 15 0	+1 0
	7	4	41	7	3	0	37	2	11	10	38 50 0	38 50 33	+0 33
	9	6	31	55	3	2	28	3	8	59	68 35 0	68 34 14	—0 46
	11	8	34	10	3	4	19	4	6	37	101 12 0	101 10 48	—1 12
	13	10	32	27	3	6	11	5	3	22	132 49 25	132 50 10	+0 45
Cent.	14	11	26	54	3	7	6	5	16	16	147 27 30	147 28 38	+1 8
Cent.	16	13	1	28	3	8	56	6	11	5	173 8 0	173 7 52	—0 8
	17	13	45	37	3	9	51	6	23	4	185 11 20	185 10 28	—0 52
	18	14	27	26	3	10	46	7	4	48	196 39 30	196 37 42	—1 48
	19	15	9	6	3	11	40	7	16	22	208 5 15	208 2 21	—2 54
	22	17	22	9	3	14	25	8	20	37	244 23 40	244 18 50	—4 50
	23	18	11	3	3	15	20	9	2	5	257 38 30	257 33 56	—4 34
Feb.	24	19	2	14	3	16	15	9	13	40	271 27 30	271 23 50	—3 40
Mart.	10	6	28	19	3	28	7	3	4	56	96 15 50	96 16 15	+0 25
	11	7	29	5	3	29	2	3	18	35	112 29 57	112 28 33	—0 27
	12	8	26	48	3	29	57	4	1	54	127 56 0	127 56 25	+0 25
::	13	9	20	18	4	0	51	4	14	52	142 20 0	142 20 41	+0 41
	14	10	9	41	4	1	46	4	27	27	155 42 0	155 42 11	+0 11

**LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXV. Currente.

<i>Transitûs Limbi Lunæ T. æq.</i>					<i>Argument. Annuum.</i>			<i>Distantia ☾ à ☉</i>			<i>Ascens. Rect. Limbi Lunæ Observata.</i>			<i>Ascens. Rect. Limbi Lunæ Comput.</i>			<i>Error Comp.</i>	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	Q.	'	"	Q.	'	"	'	"
Mart.	15	10	55	29	4	2	40	5	9	43	168	10	0	168	10	5	+0	5
Cent.	16	11	39	48	4	3	34	5	21	40	180	15	40	180	15	26	—0	14
Cent.	17	12	21	38	4	4	28	6	3	21	191	44	0	191	42	46	—1	14
	20	14	29	50	4	7	10	7	7	25	226	49	40	226	45	42	—3	58
	23	16	53	30	4	9	52	8	11	21	265	48	0	265	43	8	—4	52
	24	17	45	13	4	10	46	8	22	55	279	45	0	279	40	12	—4	48
Mart.	30	22	45	38	4	16	10	11	8	9	0	58	30	0	57	8	—1	22
Apri.	5	3	17	57	4	20	40	1	18	48	73	47	45	73	52	15	+4	30
	7	5	22	45	4	22	29	2	17	4	107	25	30	107	28	39	+3	9
	9	7	17	31	4	24	16	3	14	0	138	10	0	138	10	46	+0	46
	10	8	7	46	4	25	10	3	26	51	151	45	0	151	45	44	+0	44
	11	8	54	2	4	26	4	4	9	18	164	20	0	164	20	10	+0	10
	12	9	37	21	4	26	57	4	21	23	176	10	30	176	10	27	—0	3
	14	10	59	51	4	28	43	5	14	38	198	49	45	198	48	52	—0	53
Cent.	16	12	25	5	5	0	30	6	7	5	222	10	0	222	6	8	—3	52
Cent.	17	13	9	51	5	1	23	6	18	10	234	22	30	234	16	56	—5	34
Maii.	5	4	12	41	5	16	30	1	28	49	117	27	30	117	32	12	+4	42
	8	6	52	30	5	19	9	3	8	48	160	28	40	160	30	15	+1	35
	9	7	36	50	5	20	2	3	21	14	172	34	30	272	35	31	+1	1
	10	8	18	45	5	20	55	4	3	17	184	4	20	184	4	44	+0	24
	12	9	40	24	5	22	40	4	26	26	206	30	45	206	30	30	—0	15
	13	10	22	19	5	23	32	5	7	39	218	0	20	217	59	28	—0	52
Cent.	15	11	53	28	5	25	18	5	29	46	242	49	30	242	46	0	—3	30
Cent.	16	12	42	7	5	26	11	6	10	48	256	0	30	255	56	29	—4	1
Maii.	20	16	6	53	5	29	42	7	26	5	311	17	0	311	11	35	—5	25
Junii.	2	2	57	36	6	10	16	1	10	6	126	14	0	126	17	54	+3	54
	4	4	46	38	6	12	1	2	7	21	155	32	20	155	35	26	+3	6
	5	5	33	29	6	12	54	2	20	16	168	16	0	168	18	13	+2	13
	9	8	21	7	6	16	24	4	8	9	214	14	0	214	13	55	—0	5
	11	9	49	33	6	18	9	5	0	35	238	22	30	238	21	43	—0	47
	12	10	37	27	6	21	39	5	11	40	251	22	0	251	21	22	—0	38
Sect.::	16	14	1	47	6	22	32	6	26	32	306	32	0	306	27	39	—4	21
	17	14	52	46	6	23	25	7	8	10	320	18	0	320	12	45	—5	15
	20	17	8	54	6	26	2	8	14	54	357	23	0	357	18	28	—4	32

LUNÆ MERIDIANÆ ASCENSIONES RECTÆ
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	''	S.	O.	'	S.	O.	'	O.	'	''	Q.	'	''	'	''
Junii.	30	1	39	7	7	3	57	0	21	8	134	9	20	134	10	0	+0	40
Julii.	3	4	11	8	7	6	35	2	1	9	175	14	0	175	14	24	+0	24
	6	6	18	16	7	9	13	3	7	42	210	3	0	210	3	8	+0	8
	7	7	1	8	7	10	5	3	19	18	221	47	0	221	46	46	-0	14
	8	7	45	49	7	10	57	4	0	44	233	58	0	233	58	48	+0	48
	10	9	22	26	7	12	43	4	23	16	260	9	30	260	10	20	+0	50
	12	11	7	6	7	14	28	5	15	48	288	22	10	288	20	48	-1	22
	13	11	58	34	7	15	21	5	27	12	302	15	30	302	13	56	-1	34
	16	14	23	19	7	17	59	7	2	33	341	30	0	341	27	0	-3	0
	17	15	7	51	7	18	52	7	14	53	353	39	0	353	36	27	-2	33
	18	15	52	3	7	19	44	7	27	33	05	43	0	05	40	58	-2	2
	19	16	37	9	7	20	37	8	10	34	18	0	30	17	58	41	-1	49
	20	17	24	33	7	21	30	8	23	56	30	52	30	30	50	6	-2	24
	23	20	11	55	7	24	9	10	5	50	75	47	20	75	41	56	-5	24
Julii.	24	21	16	9	7	25	2	10	20	7	92	52	30	92	47	48	-4	42
Aug.	6	7	15	43	8	5	38	3	22	41	255	0	20	254	59	58	-0	22
	8	9	2	0	8	7	25	4	15	33	283	2	20	283	2	56	+0	36
	9	9	50	22	8	8	18	4	27	2	296	44	0	296	44	13	+0	13
	13	13	5	14	8	11	51	6	14	46	349	31	30	349	30	0	-1	30
	14	13	50	10	8	12	44	6	27	20	01	46	30	01	45	0	-1	30
	15	14	34	26	8	13	37	7	10	12	13	51	30	13	49	31	-1	59
	16	15	22	21	8	14	30	7	23	23	26	51	20	26	51	27	+0	6
	17	16	12	11	8	15	24	8	6	52	40	20	0	40	19	38	-0	22
	18	17	5	58	8	16	17	8	20	37	54	48	0	54	46	10	-1	50
	20	19	5	43	8	18	5	9	18	37	86	47	30	86	43	52	-3	38
Aug.	21	20	8	59	8	18	59	10	2	39	103	38	15	103	34	17	-3	58
Cent.	1	4	22	8	8	27	55	2	9	32	236	44	20	236	43	40	-0	40
Cent.	2	5	9	11	8	28	48	2	21	2	249	48	10	249	48	9	-0	1
Sept.	5	7	41	11	9	1	30	3	25	35	290	57	40	290	59	40	+2	0
	7	9	21	55	9	3	18	4	19	7	318	11	0	318	10	11	-0	49
	8	10	9	51	9	4	12	5	1	11	331	11	15	331	9	56	-1	19
	9	10	56	20	9	5	6	5	13	29	343	49	20	343	47	51	-1	29
	11	12	30	11	9	6	53	6	8	58	9	19	20	9	17	51	-1	29
	12	13	17	30	9	7	47	6	22	10	22	10	0	22	9	17	-0	43

CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Ascens. Rect. Limbi Lunæ Observata.			Ascens. Rect. Limbi Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
Sept.	13	14	7	25	9	8	41	7	5	39	35	40	0	35	39	40	—0	20
	14	15	0	58	9	9	36	7	19	23	50	4	30	50	4	18	—0	12
	15	15	58	32	9	10	30	8	3	19	65	29	45	65	29	51	+0	6
	16	16	59	39	9	11	25	8	17	20	81	48	0	81	47	37	—0	23
	17	18	2	25	9	12	19	9	1	22	98	31	15	98	29	51	—1	24
Sept.::	19	20	2	50	9	14	9	9	28	58	130	40	40	130	38	27	—2	13
Octo.	1	4	40	22	9	24	7	2	11	50	271	15	30	271	15	22	—0	8
	2	5	31	50	9	25	1	2	23	17	285	8	30	285	9	22	+0	52
	3	6	22	44	9	25	56	3	4	52	298	53	20	298	54	28	+1	8
	4	7	10	47	9	26	51	3	16	35	312	34	0	312	34	49	+0	49
	5	8	0	16	9	27	45	3	28	34	325	18	50	325	18	21	—0	29
	7	9	32	17	9	29	35	4	23	19	350	21	0	350	19	37	—1	23
	11	12	50	14	10	3	14	6	16	50	43	55	0	43	57	48	+2	48
	15	16	58	8	10	6	56	8	13	26	110	0	15	109	59	19	—0	56
	16	17	58	27	10	7	51	8	27	21	126	6	40	126	4	25	—2	15
	19	20	31	23	10	10	36	10	7	0	167	24	30	167	22	20	—2	10
	30	4	15	8	10	19	48	2	2	28	293	31	0	293	32	46	+1	46
Octo.	31	5	4	37	10	20	43	2	13	55	306	54	30	306	56	17	+1	47
Nov.	1	5	52	15	10	21	39	2	25	34	319	50	0	319	52	17	+2	17
	2	6	28	8	10	22	34	3	7	29	332	19	20	332	21	7	+1	47
	3	7	22	45	10	23	29	3	19	43	344	29	30	344	30	11	+0	41
	4	8	7	4	10	24	25	4	2	19	356	35	20	356	36	6	+0	46
	5	8	52	23	10	25	20	4	15	17	8	56	0	8	54	35	—1	25
	6	9	40	0	10	26	16	4	28	41	21	51	0	21	49	30	—1	30
	9	12	31	53	10	29	3	6	10	58	67	54	0	67	51	49	—2	11
	10	13	37	39	11	0	0	6	25	28	85	22	30	85	21	55	—0	35
	11	14	45	35	11	0	56	7	9	59	103	8	20	103	8	20	—0	0
	12	15	48	53	11	1	52	7	24	18	120	14	30	120	12	55	—1	35
	16	19	14	50	11	5	35	9	17	59	175	49	0	175	44	34	—4	26
	17	19	57	36	11	6	31	10	0	22	187	31	20	187	27	19	—4	1
Nov.	19	21	21	55	11	8	22	10	24	5	210	38	15	210	35	20	—2	55
Dec.	2	6	0	9	11	18	35	2	28	44	351	23	0	351	26	44	+3	44
	3	7	28	2	11	20	27	3	24	12	15	23	15	15	25	4	+1	49
	4	8	15	42	11	21	23	4	7	35	28	19	15	28	20	48	+1	33

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXV. Currente.

Transitus Limbi Lunæ T. æq.					Argument Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	ED.	H.	'	"	S.	O.	'	S.	O.	'	Q.	'	"	Q.	'	"	'	"
Dec.	5	9	8	5	II	22	19	4	21	24	♄ 15	42	26	♄ 15	42	34	+0	8
	6	10	6	14	II	23	15	5	5	36	♄ 1	5	14	♄ 1	4	26	—0	48
	7	11	10	12	II	24	11	5	20	6	♄ 16	54	4	♄ 16	53	17	—0	47
Cent.	8	12	19	26	II	25	8	6	4	46	♄ 2	58	38	♄ 2	58	3	—0	35
	9	13	28	47	II	26	5	6	19	26	♄ 19	2	55	♄ 19	2	7	—0	48
	10	14	32	56	II	27	1	7	3	54	♄ 4	49	34	♄ 4	48	46	—0	48
	11	15	31	12	II	27	58	7	18	3	♄ 20	8	31	♄ 20	7	9	—1	22
Dec.	31	6	7	41	0	15	39	3	3	42	Υ 24	58	41	Υ 24	59	8	+0	27

Anno JULIANO MDCCXXVI. Currente.

Jan.	3	8	47	55	0	18	28	4	14	50	♄ 8 37 12	♄ 8 37 46	+0 34
	4	9	52	32	0	19	24	4	29	14	♄ 24 12 6	♄ 24 11 52	-0 14
	5	11	0	12	0	20	21	5	13	50	♄ 10 6 37	♄ 10 6 17	-0 20
Cent.	6	12	8	23	0	21	17	5	28	25	♄ 26 7 46	♄ 26 7 30	-0 16
	7	13	12	15	0	22	14	6	12	52	♄ 11 58 57	♄ 11 59 3	+0 6
	8	14	9	8	0	23	10	6	27	0	♄ 27 26 57	♄ 27 26 58	+0 1
	9	15	0	42	0	24	6	7	10	47	♄ 12 25 5	♄ 12 23 40	-1 25
::	10	15	48	8	0	25	2	7	24	8	♄ 26 48 0	♄ 26 45 41	-2 19
	13	18	0	45	0	27	48	9	1	48	♄ 6 54 53	♄ 6 47 46	-7 7
	14	18	45	43	0	28	43	9	13	38	♄ 19 31 7	♄ 19 25 0	-6 7
Cent.	25	2	39	35	1	8	1	1	6	52	♄ 24 10 39	♄ 24 10 4	-0 35
	28	4	51	15	1	10	47	2	14	15	♄ 4 13 30	♄ 4 15 55	+2 25
	30	6	35	54	1	12	38	3	11	7	♄ 2 35 5	♄ 2 37 0	+1 55
	31	7	40	14	1	13	34	3	25	7	♄ 17 23 54	♄ 17 26 18	+2 24
Feb.	1	8	40	12	1	14	30	4	9	18	♄ 2 34 34	♄ 2 34 38	+0 4
	3	10	49	22	1	16	22	5	7	58	♄ 3 40 1	♄ 3 39 10	-0 51
Cent.	5	12	44	12	1	18	13	6	6	6	♄ 4 28 46	♄ 4 29 8	+0 22
	6	13	35	29	1	19	9	6	19	43	♄ 19 23 58	♄ 19 23 39	-0 19
	9	15	53	14	1	21	54	7	28	24	♄ 1 17 43	♄ 1 12 13	-5 30
	11	17	26	0	1	23	45	8	22	33	♄ 27 4 29	♄ 26 58 22	-6 7
	12	18	13	42	1	24	40	9	4	14	♄ 9 33 4	♄ 9 27 7	-5 57
	24	2	49	25	2	4	44	1	12	43	♄ 0 3 56	♄ 0 4 4	+0 8
	25	3	38	10	2	5	39	1	25	42	♄ 13 59 15	♄ 13 59 53	+0 38

**LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXVI. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
Feb.	26	4	31	8	2	6	34	2	9	2	♌ 28	9	49	♌ 28	10	56	+1	7
	27	5	28	45	2	7	29	2	22	41	♍ 12	36	25	♍ 12	37	12	+0	47
Feb.	28	6	30	12	2	8	25	3	6	35	♍ 27	18	11	♍ 27	18	17	+0	6
Mart.	1	7	37	49	2	9	20	3	20	41	♎ 12	15	8	♎ 12	14	24	—0	44
	2	8	35	58	2	10	15	4	4	44	♎ 27	15	44	♎ 27	14	11	—1	33
	4	10	30	5	2	12	5	5	2	35	♏ 27	19	29	♏ 27	17	58	—1	31
	5	11	21	5	2	13	0	5	16	11	♏ 12	9	1	♏ 12	7	20	—1	41
Cent.	6	12	10	8	2	13	55	5	29	29	♏ 26	42	2	♏ 26	41	22	—0	40
	9	14	29	11	2	16	38	7	7	31	♐ 8	16	16	♐ 8	12	48	—3	28
	10	15	16	31	2	17	32	7	19	37	♐ 21	23	0	♐ 21	19	28	—3	32
	12	16	56	19	2	19	21	8	13	13	♐ 16	46	50	♐ 16	42	32	—4	18
	26	3	23	7	3	1	5	1	21	12	♑ 8	8	15	♑ 8	9	6	+0	51
	27	4	24	12	3	1	59	2	5	2	♑ 22	53	48	♑ 22	54	32	+0	44
Mart.	30	7	28	36	3	4	43	3	16	58	♒ 7	16	56	♒ 7	19	9	+2	13
Apri.	5	12	20	22	3	10	6	6	5	30	♒ 2	15	5	♒ 2	13	9	—1	56
	6	13	7	11	3	11	0	6	17	36	♒ 15	32	58	♒ 15	30	17	—2	41
	7	13	55	52	3	11	53	6	29	29	♒ 28	35	20	♒ 28	32	0	—3	20
	8	14	46	28	3	12	47	7	11	11	♓ 11	23	35	♓ 11	19	22	—4	13
	9	15	38	18	3	13	40	7	22	46	♓ 23	58	5	♓ 23	54	42	—3	23
Apri.	16	21	9	52	3	19	55	10	14	19	♓ 21	33	56	♓ 21	33	36	—0	20
Maii.	9	16	4	15	4	9	26	7	25	54	♓ 26	11	7	♓ 26	8	28	—2	39
	13	19	3	0	4	12	57	9	12	17	♈ 15	49	27	♈ 15	48	21	—1	6
	14	19	45	2	4	13	50	9	24	28	♈ 28	47	4	♈ 28	45	14	—1	50
	16	21	13	54	4	15	35	10	19	55	♉ 25	56	52	♉ 25	55	50	—1	2
	17	22	3	37	4	16	28	11	3	12	♉ 10	17	26	♉ 10	16	31	—0	55
	27	6	43	51	4	24	25	3	9	32	♊ 25	59	46	♊ 25	59	29	—0	17
	29	8	12	0	4	26	10	4	5	4	♊ 23	3	18	♊ 23	2	30	—0	48
Maii.	30	8	56	34	4	27	3	4	17	17	♊ 6	10	46	♊ 6	10	1	—0	45
Junii.	1	10	31	10	4	28	48	5	10	50	♋ 1	52	22	♋ 1	51	31	—0	51
	2	11	21	39	4	29	41	5	22	16	♋ 14	30	10	♋ 14	29	14	—0	56
	6	14	46	24	5	3	11	7	6	59	♋ 4	3	22	♋ 4	0	23	—2	59
	7	15	33	34	5	4	4	7	18	13	♋ 16	18	45	♋ 16	15	48	—2	57
	8	16	17	11	5	4	56	7	29	34	♋ 28	35	20	♋ 28	32	32	—2	48
	9	16	59	0	5	5	48	8	11	8	♌ 10	58	8	♌ 10	56	11	—1	57

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	Q.	'	"	'	"		
Junii. 10 17 40 5					5	6	41	8	22	57	♄	23	32	52	♄	23	30	35	—2	17
11 18 21 23					5	7	33	9	5	6	♄	6	25	18	♄	6	22	23	—2	55
12 19 4 45					5	8	26	9	17	39	♄	19	40	46	♄	19	37	58	—2	48
15 21 39 38					5	11	4	10	27	54	♄	2	38	17	♄	2	34	0	—4	17
21 2 57 37					5	15	29	1	10	25	♄	21	15	31	♄	21	18	55	+3	24
22 3 50 53					5	16	22	1	24	36	♄	6	24	16	♄	6	27	31	+3	15
25 6 10 21					5	18	59	3	4	48	♄	18	51	22	♄	18	52	11	—0	49
29 9 17 58					5	22	29	4	23	2	♄	10	30	41	♄	10	32	1	+1	20
Junii. 30 10 9 15					5	23	22	5	4	24	♄	22	59	14	♄	23	0	58	+1	44
Julii. 1 11 1 15					5	24	14	5	15	36	♄	5	23	28	♄	5	24	41	+1	13
2 11 52 31					5	25	7	5	26	42	♄	17	42	39	♄	17	44	26	+1	47
Cent. 3 12 43 4					5	26	0	6	7	43	♄	0	0	32	♄	0	0	16	—0	16
4 14 15 20					5	27	45	6	29	53	♄	24	32	2	♄	24	30	37	—1	25
6 14 57 28					5	28	37	7	11	8	♄	6	50	56	♄	6	49	2	—1	54
7 15 38 19					5	29	30	7	22	36	♄	19	16	6	♄	19	13	53	—2	13
8 16 18 55					6	0	22	8	4	21	♄	1	52	0	♄	1	49	20	—2	40
10 17 44 7					6	2	7	8	28	56	♄	27	53	49	♄	27	51	48	—2	1
12 19 24 28					6	3	52	9	25	16	♄	25	44	29	♄	25	39	41	—4	48
15 22 34 10					6	6	32	11	7	53	♄	11	30	25	♄	11	25	19	—5	6
Julii. 25 6 24 40					6	14	28	3	11	12	♄	23	43	3	♄	23	44	15	+1	12
Cent. 1 12 12 49					6	20	39	6	0	40	♄	20	35	21	♄	20	35	47	+0	26
Aug. 2 12 56 45					6	21	32	6	11	48	♄	2	56	26	♄	2	56	7	—0	19
3 13 38 2					6	22	24	6	23	4	♄	15	22	4	♄	15	21	8	—0	56
4 14 18 35					6	23	17	7	4	32	♄	27	55	2	♄	27	53	56	—1	6
5 14 59 30					6	24	10	7	16	17	♄	10	38	56	♄	10	37	38	—1	18
6 15 41 56					6	25	3	7	28	22	♄	23	36	9	♄	23	35	27	—0	42
7 16 27 16					6	25	56	8	10	50	♄	6	52	13	♄	6	51	20	—0	53
8 17 16 46					6	26	49	8	23	44	♄	20	31	48	♄	20	29	26	—2	22
9 18 11 30					6	27	42	9	7	3	♄	4	37	55	♄	4	33	45	—4	10
11 20 15 14					6	29	29	10	4	55	♄	4	13	37	♄	4	7	20	—6	17
12 21 20 21					7	0	23	10	19	17	♄	19	39	16	♄	19	31	45	—7	31
13 22 23 26					7	1	17	11	3	46	♄	5	17	55	♄	5	11	18	—6	37
Aug. 19 2 41 41					7	5	44	1	13	48	♄	21	8	29	♄	21	7	26	—1	3
20 3 29 6					7	6	37	1	26	50	♄	5	4	58	♄	5	4	15	+0	43

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	Q.	'	"	Q.	'	"	'	"		
Aug.	22	5	7	25	7	8	24	2	21	50	♌	1	40	31	♌	1	41	0	+0	29
	23	5	58	51	7	9	18	3	3	51	♌	14	28	20	♌	14	29	11	+0	51
	24	6	51	7	7	10	11	3	15	35	♌	27	1	47	♌	27	3	18	+1	31
	25	7	43	12	7	11	5	3	27	6	♍	9	24	54	♍	9	27	42	+2	48
	26	8	34	1	7	11	59	4	8	27	♍	21	43	22	♍	21	46	16	+2	54
	27	9	22	40	7	12	52	4	19	41	♍	4	0	3	♍	4	2	43	+2	40
	28	10	8	50	7	13	46	5	0	52	♍	16	18	6	♍	16	20	6	+2	0
Aug.	29	10	52	36	7	14	39	5	12	4	♍	28	39	43	♍	28	41	14	+1	31
Cent.	31	12	16	43	7	16	26	6	4	45	♎	23	45	49	♎	23	45	44	—0	5
Cent.	1	12	56	46	7	17	19	6	16	22	♎	6	32	40	♎	6	32	33	—0	7
Sept.	2	13	41	0	7	18	13	6	28	16	♎	19	33	27	♎	19	33	42	+0	15
	3	14	25	41	7	19	6	7	10	28	♏	2	49	17	♏	2	48	41	—0	36
	4	15	13	50	7	20	0	7	23	2	♏	16	21	20	♏	16	20	13	—1	7
	6	17	3	32	7	21	48	8	19	17	♏	14	20	16	♏	14	18	40	—1	36
	7	18	4	37	7	22	42	9	2	58	♏	28	49	41	♏	28	47	6	—2	35
	10	21	8	24	7	25	26	10	15	15	♏	13	48	56	♏	13	46	19	—2	37
	17	2	6	28	8	0	50	1	6	44	♏	12	17	6	♏	12	15	57	—1	9
	24	8	3	40	8	7	11	3	29	44	♏	11	32	26	♏	11	34	14	+1	48
	25	8	48	12	8	8	5	4	11	5	♏	23	50	42	♏	23	52	26	+1	44
	27	10	12	9	8	9	54	5	3	58	♏	18	50	55	♏	18	52	20	+1	25
	28	10	53	27	8	10	48	5	15	37	♏	1	40	32	♏	1	41	1	+0	29
Sept.	30	12	21	6	8	12	36	6	9	40	♏	28	8	50	♏	28	8	14	—0	36
Octo.	1	13	9	54	8	13	31	6	22	8	♏	11	49	19	♏	11	48	56	—0	23
	2	14	1	54	8	14	26	7	4	56	♏	25	47	34	♏	25	46	40	—0	54
	3	14	58	24	8	15	21	7	18	5	♏	10	1	6	♏	10	0	18	—0	48
	4	15	58	48	8	16	16	8	1	32	♏	24	28	43	♏	24	27	15	—1	28
	5	17	1	1	8	17	11	8	15	16	♏	9	6	30	♏	9	4	9	—2	21
	6	18	2	27	8	18	6	8	29	10	♏	23	50	27	♏	23	47	12	—3	15
	7	19	0	56	8	19	1	9	13	7	♏	8	37	38	♏	8	33	6	—4	32
	10	21	35	3	8	21	46	10	24	32	♏	22	46	25	♏	22	43	8	—3	17
	20	5	8	30	9	0	1	2	15	52	♏	24	11	20	♏	24	13	3	+1	43
	21	5	56	42	9	0	56	2	27	19	♏	6	28	32	♏	6	30	27	+1	55
	25	8	47	23	9	4	36	4	13	26	♏	26	2	15	♏	26	3	23	+1	8
Octo.	31	13	49	44	9	10	9	6	29	28	♏	19	22	17	♏	19	20	37	—1	40

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M.	D.	H.	'	"	S.	O.	'	S.	O.	'	"	O.	'	"	O.	'	"	'	"	
Nov.					9	11	4	7	13	13	☾	4	18	39	☾	4	16	55	—	1 44
					9	12	0	7	27	8	☾	19	17	43	☾	19	15	33	—	2 10
					9	12	56	8	11	7	☾	4	12	40	☾	4	9	51	—	2 49
					9	25	0	1	24	35	☾	1	25	1	☾	1	27	4	+	2 3
					9	27	47	2	28	39	☾	8	4	13	☾	8	6	48	+	2 35
					9	29	37	3	22	0	☾	2	59	48	☾	3	01	52	+	2 4
					10	0	33	4	4	4	☾	15	55	36	☾	15	56	51	+	1 15
					10	2	24	4	29	13	☾	13	8	15	☾	13	8	22	+	0 7
Nov.					10	4	17	5	25	52	☾	12	26	0	☾	12	23	33	—	2 27
Dec.					10	8	59	8	6	19	☾	28	57	3	☾	28	53	7	—	3 56
					10	9	54	8	20	12	☾	13	38	11	☾	13	32	41	—	5 30
					10	12	42	10	0	1	☾	25	44	11	☾	25	38	36	—	5 35
					10	22	2	1	25	56	☾	3	20	7	☾	3	21	39	+	1 32
					10	22	57	2	7	13	☾	15	29	37	☾	15	31	50	+	2 13
					10	27	36	4	7	50	☾	20	9	26	☾	20	9	55	+	0 29
					10	29	29	5	4	52	☾	19	33	14	☾	19	30	52	—	2 22
					11	0	25	5	18	59	☾	5	1	24	☾	4	59	8	—	2 16
Cent.					11	1	22	6	3	21	☾	20	49	27	☾	20	47	15	—	2 12
					11	3	15	7	2	17	☾	22	25	29	☾	22	23	16	—	2 13
					11	4	11	7	16	35	☾	7	50	4	☾	7	46	59	—	3 5
Dec.					11	5	7	8	0	39	☾	22	49	36	☾	22	45	19	—	4 17

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Jan.					11	6	3	8	14	22	☾	7	22	0	☾	7	16	23	-5	37
					11	6	59	8	27	44	☾	21	28	33	☾	21	21	40	-6	53
					11	9	47	10	5	30	☾	1	42	38	☾	1	37	29	-5	9
					11	19	4	1	27	54	☾	5	43	21	☾	5	44	17	+0	56
					11	20	55	2	21	32	☾	0	57	21	☾	0	59	43	+2	22
					11	22	46	3	16	45	☾	27	46	48	☾	27	47	40	+0	52
Cent.					11	27	27	5	27	1	☾	13	51	29	☾	13	49	12	-2	17
					11	28	23	6	11	36	☾	29	46	48	☾	29	46	20	-0	28
Jan.					0	1	10	7	24	7	☾	15	39	1	☾	15	36	20	-2	41
Feb.					0	3	57	9	3	24	☾	27	24	46	☾	27	19	0	-5	46

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M.	D.	H.	'	"	S.	o.	'	S.	o.	'	o.	'	"	o.	'	"	'	"		
Feb.	15	3	59	39	0	15	54	2	1	38	♌	9	37	36	♌	9	37	21	—0	15
	17	5	41	30	0	17	44	2	26	46	♍	6	25	30	♍	6	25	7	—0	23
	18	6	39	41	0	18	40	3	10	1	♍	20	29	15	♍	20	28	30	—0	45
	20	8	44	40	0	20	31	4	7	44	♎	20	4	1	♎	20	1	24	—2	37
:: ::	24	12	34	3	0	24	12	6	5	24	♏	22	28	28	♏	22	30	31	+2	3
	27	15	4	52	0	26	56	7	17	3	♏	7	35	39	♏	7	34	38	—1	1
Feb.	28	15	56	50	0	27	51	8	0	13	♏	21	44	15	♏	21	42	13	—2	2
Mart.	1	16	50	16	0	28	46	8	13	1	♐	5	24	7	♐	5	22	21	—1	46
	2	17	44	49	0	29	41	8	25	26	♐	18	41	5	♐	18	37	37	—3	28
	7	21	53	37	1	4	15	10	23	8	♐	20	59	45	♐	20	58	23	—1	22
	14	1	58	10	1	9	39	1	0	47	♑	5	37	48	♑	5	34	45	—3	3
	15	2	45	29	1	10	34	1	12	50	♑	18	45	15	♑	18	42	46	—2	29
	16	3	39	34	1	11	28	1	25	16	♒	2	11	22	♒	2	9	50	—1	32
	17	4	33	5	1	12	22	2	8	5	♒	15	54	56	♒	15	53	25	—1	31
	18	5	32	31	1	13	17	2	21	18	♒	29	59	23	♒	29	57	56	—1	27
	19	6	33	33	1	14	12	3	4	54	♓	14	24	36	♓	14	22	20	—2	16
	20	7	33	44	1	15	6	3	18	48	♓	29	7	54	♓	29	5	4	—2	50
	21	8	31	24	1	16	1	4	2	55	♓	14	7	14	♓	14	4	16	—2	58
	23	10	17	43	1	17	50	5	1	23	♓	14	35	40	♓	14	33	44	—1	56
	25	11	57	30	1	19	38	5	29	31	♓	15	5	4	♓	15	5	3	—0	1
Mart.	27	13	42	29	1	21	26	6	26	42	♓	14	42	44	♓	14	43	10	+0	26
Apri.	3	19	49	54	1	27	44	9	21	58	♐	16	29	28	♐	16	27	9	—2	19
	5	21	13	13	1	29	31	10	14	31	♐	10	49	10	♐	10	47	45	—1	25
	7	22	32	45	2	1	18	11	7	9	♐	5	32	5	♐	5	29	58	—2	7
	12	1	32	44	2	4	52	0	24	40	♑	27	51	3	♑	27	47	46	—3	17
	27	15	11	4	2	18	15	7	14	56	♑	3	23	38	♑	3	23	57	+0	19
	28	16	5	28	2	19	8	7	26	57	♑	16	24	51	♑	16	24	25	—0	26
	29	16	56	34	2	20	1	8	8	45	♑	29	6	54	♑	29	5	54	—1	0
Apri.	30	17	43	53	2	20	54	8	20	21	♑	11	32	36	♑	11	30	53	—1	43
Maii.	6	21	51	17	2	26	11	10	29	33	♑	25	49	5	♑	25	46	17	—2	48
	7	22	36	55	2	27	4	11	11	36	♑	8	59	17	♑	8	56	55	—2	22
	12	2	20	13	3	0	37	1	2	57	♑	5	17	25	♑	5	16	26	—0	59
	13	3	21	43	3	1	30	1	16	33	♑	19	58	41	♑	19	58	29	—0	12
	14	4	20	36	3	2	23	2	0	21	♑	4	42	52	♑	4	43	28	+0	36

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Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.		
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	Q.	'	"		'	"		
Maii. 15 5 15 42					3	3	16	2	14	16	♈	19	26	50	♈	19	26	49	-0	1	
16 6 7 4					3	4	9	2	28	13	♉	4	6	35	♉	4	6	19	-0	16	
18 7 42 56					3	5	56	3	25	52	♊	3	12	52	♊	3	11	31	-1	21	
19 8 30 11					3	6	47	4	9	29	♋	17	38	21	♋	17	37	2	-1	19	
Cent. 20 9 23 10					3	7	40	4	22	58	♌	2	0	40	♌	1	59	47	-0	53	
21 10 9 43					3	8	33	5	5	58	♌	16	10	8	♌	16	9	54	-0	14	
:: 22 11 3 24					3	9	26	5	18	47	♍	0	11	58	♍	0	12	29	+0	31	
26 14 47 22					3	12	58	7	7	27	♎	23	45	53	♎	23	44	48	-1	5	
Maii. 30 17 44 45					3	16	28	8	23	18	♏	13	9	11	♏	13	6	28	-2	43	
Junii. 1 19 3 25					3	18	12	9	16	21	♐	7	38	2	♐	7	35	42	-2	20	
2 19 44 21					3	19	5	9	28	7	♐	20	11	43	♐	20	9	11	-2	32	
3 20 28 4					3	19	57	10	10	9	♑	3	5	37	♑	3	3	12	-2	25	
12 4 3 14					3	27	0	1	27	24	♈	29	25	50	♈	29	28	6	+2	16	
13 4 53 22					3	27	53	2	11	28	♉	14	16	03	♉	14	18	22	+2	19	
14 5 41 9					3	28	45	2	25	24	♊	28	53	11	♊	28	55	20	+2	9	
17 8 5 6					4	1	23	4	5	47	♋	11	31	55	♋	11	33	12	+1	17	
18 8 56 55					4	2	15	4	18	38	♌	25	22	33	♌	25	23	26	+0	53	
Cent. 19 9 52 20					4	3	8	5	1	12	♍	9	0	33	♍	9	3	0	+2	27	
20 10 47 9					4	4	1	5	13	27	♍	22	30	22	♍	22	30	54	+0	32	
21 11 43 0					4	4	54	5	25	25	♎	5	43	24	♎	5	44	23	+0	59	
24 14 16 46					4	7	31	7	0	1	♏	13	57	16	♏	13	55	46	-1	30	
29 17 39 0					4	11	53	8	26	43	♐	14	58	17	♐	14	55	36	-2	41	
Junii. 30 18 20 37					4	12	45	9	8	31	♐	27	30	9	♐	27	27	39	-2	30	
Julii. 1 19 5 42					4	13	38	9	20	38	♑	10	24	15	♑	10	20	56	-3	19	
2 19 55 23					4	14	30	10	3	7	♑	23	45	38	♑	23	42	21	-3	17	
11 3 36 34					4	21	34	1	24	10	♒	23	45	27	♒	23	48	29	+3	2	
Cent. 14 6 3 27					4	24	12	3	5	31	♓	7	19	52	♓	7	22	48	+2	56	
19 10 31 18					4	28	37	5	7	38	♈	14	17	52	♈	14	21	26	+3	34	
20 11 22 37					4	29	29	5	19	7	♉	27	0	15	♉	27	3	12	+2	57	
21 12 12 50					5	0	22	6	0	25	♊	9	31	35	♊	9	33	53	+2	18	
23 13 39 0					5	2	7	6	22	36	♋	4	3	33	♋	4	3	44	+0	11	
24 14 18 45					5	3	0	7	3	39	♌	16	11	57	♌	16	10	0	-1	57	
26 15 36 25					5	4	45	7	26	0	♍	10	27	18	♍	10	24	12	-3	6	
27 16 16 38					5	5	37	8	7	27	♎	22	44	8	♎	22	41	31	-2	37	

LUNÆ MERIDIANÆ LONGITUDINES
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Anno JULIANO MDCCXXVII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.		
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"			
Julii.	28	16	59	26	5	6	30	8	19	12	☾	5	15	38	☾	5	12	49	—2	49	
	31	19	33	41	5	9	9	9	26	41	☿	15	13	24	☿	15	7	22	—6	2	
	Aug.	1	20	34	23	5	10	3	10	10	4	☿	29	33	45	☿	29	27	12	—6	33
		3	22	39	34	5	11	50	11	7	59	☿	29	43	46	☿	29	38	5	—5	41
Cent.	8	2	16	7	5	15	23	1	5	51	☿	2	14	19	☿	2	15	23	+1	4	
	9	3	8	50	5	16	16	1	20	6	☿	17	25	20	☿	17	28	32	+3	12	
	10	3	56	20	5	17	9	2	4	0	☿	2	10	46	☿	2	14	20	+3	34	
	11	4	48	14	5	18	2	2	17	34	☿	16	33	19	☿	16	36	41	+3	22	
	12	5	42	0	5	18	56	3	0	45	☿	0	31	30	☿	0	34	31	+3	1	
	13	6	37	11	5	19	49	3	13	32	☿	14	6	29	☿	14	9	54	+3	25	
	14	7	32	49	5	20	43	3	25	55	☿	27	21	3	☿	27	25	3	+4	0	
	16	9	19	24	5	22	29	4	19	36	☿	22	59	50	☿	23	4	25	+4	35	
	17	10	8	11	5	23	23	5	1	0	☿	5	29	43	☿	5	33	31	+3	48	
	18	10	53	32	5	24	16	5	12	10	☿	17	49	8	☿	17	52	15	+3	7	
	19	11	35	56	5	25	9	5	25	51	☿	0	1	35	☿	0	3	27	+1	52	
	20	12	18	10	5	26	2	6	4	9	☿	12	9	55	☿	12	11	9	+1	14	
	22	13	35	54	5	27	48	6	26	6	☿	6	25	23	☿	6	23	41	—1	42	
	23	14	15	31	5	28	42	7	7	15	☿	18	38	58	☿	18	36	40	—2	18	
	24	14	57	5	5	29	35	7	18	37	☿	1	1	31	☿	0	58	43	—2	48	
	25	15	41	38	6	0	28	8	0	17	☿	13	36	40	☿	13	34	0	—2	40	
	26	16	30	12	6	1	22	8	12	18	☿	26	30	2	☿	26	26	51	—3	11	
	Aug.	30	20	21	30	6	4	57	10	4	36	☿	22	14	57	☿	22	8	19	—6	38
	Sept.	1	22	17	41	6	6	45	11	3	1	☿	22	45	50	☿	22	39	16	—6	34
	Cent.	8	3	32	6	6	12	9	1	28	27	☿	24	54	15	☿	24	56	2	+1	47
9		4	28	36	6	13	3	2	11	42	☿	9	2	36	☿	9	4	55	+2	19	
11		6	21	47	6	14	52	3	6	59	☿	5	59	1	☿	6	1	53	+2	52	
12		7	15	16	6	15	46	3	19	2	☿	18	51	57	☿	18	55	10	+3	13	
14		8	51	39	6	17	34	4	2	9	☿	13	48	40	☿	13	52	3	+3	23	
15		9	34	49	6	18	28	4	23	21	☿	26	1	8	☿	26	4	27	+3	19	
16		10	15	34	6	19	22	5	4	24	☿	8	8	41	☿	8	11	48	+3	7	
18		11	34	42	6	21	9	5	26	21	☿	2	25	41	☿	2	26	41	+1	0	
20	12	56	14	6	22	57	6	18	34	☿	27	4	34	☿	27	3	25	—1	9		
21	13	39	56	6	23	51	6	29	58	☿	9	38	20	☿	9	36	50	—1	30		
22	14	27	11	6	24	46	7	11	38	☿	22	26	5	☿	22	23	57	—2	8		

LUNÆ MERIDIANÆ LONGITUDINES
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CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.						
M.	D.	H.	'	"	S.	O.	'	"	S.	O.	'	"	S.	O.	'	"	'	"			
Sept.	23	15	18	30	6	25	40		7	23	39	II	5	29	39	II	5	26	57	-2	42
	24	16	13	32	6	26	35		8	6	2	II	18	49	58	II	18	47	39	-2	19
	25	17	11	28	6	27	29		8	18	50	☾	2	30	58	☾	2	27	56	-3	2
::	26	18	10	22	6	28	24		9	2	2	☾	16	31	56	☾	16	28	47	-3	9
Sept.	27	19	8	15	6	29	19		9	15	37	☾	0	54	54	☾	0	50	50	-4	4
Octo.::	1	22	39	30	7	2	58		11	12	19	☾	1	30	48	☾	1	27	34	-3	14
	8	4	11	0	7	8	27		2	4	21	☾	0	32	44	☾	0	34	37	+1	53
	10	5	59	24	7	10	17		2	29	3	☾	26	48	34	☾	26	50	9	+1	35
	12	7	32	8	7	12	7		3	22	11	☾	21	42	34	☾	21	43	15	+0	41
	13	8	13	40	7	13	1		4	3	29	☾	3	51	18	☾	3	53	11	+1	53
::	14	8	53	25	7	13	56		4	14	40	☾	15	58	22	☾	15	59	42	+1	20
	17	10	52	10	7	16	40		5	18	6	☾	22	44	51	☾	22	44	37	-0	14
	20	13	14	34	7	19	25		6	22	51	II	1	20	49	II	1	18	53	-1	56
	21	14	9	5	7	20	20		7	5	0	II	14	43	52	II	14	41	21	-2	31
::	22	15	6	19	7	21	16		7	17	30	II	28	19	19	II	28	18	53	-0	26
	26	18	49	48	7	24	58		9	10	45	☾	25	1	48	☾	24	58	27	-3	21
	27	19	39	55	7	25	53		9	24	40	☾	9	43	17	☾	9	39	6	-4	11
Octo.	29	21	18	1	7	27	44		10	22	46	☾	9	39	27	☾	9	35	22	-4	5
Nov.	8	5	26	32	8	6	5		2	19	32	☾	16	44	52	☾	16	45	26	+0	34
	12	8	8	0	8	9	46		4	5	4	☾	5	29	50	☾	5	29	14	-0	36
	13	8	47	54	8	10	41		4	16	25	☾	17	48	7	☾	17	49	30	+1	23
	14	9	30	2	8	11	36		4	27	51	☾	0	19	34	☾	0	20	18	+0	44
	15	10	15	25	8	12	32		5	9	28	☾	13	10	18	☾	13	9	23	-0	55
	16	11	4	54	8	13	28		5	21	19	☾	26	18	39	☾	26	18	58	+0	19
	17	12	1	22	8	14	24		6	3	27	II	9	50	40	II	9	48	7	-2	33
Nov.	22	16	46	40	8	19	4		8	8	33	☾	20	39	55	☾	20	38	24	-1	31
Dec.	5	3	18	18	9	0	16		1	16	15	☾	11	14	6	☾	11	13	18	-0	48
	6	4	3	20	9	1	12		1	27	53	☾	23	49	53	☾	23	48	49	-1	4
	7	4	45	6	9	2	8		2	9	21	☾	6	9	36	☾	6	8	41	-0	55
	12	8	6	48	9	6	46		4	6	36	☾	7	29	6	☾	7	28	58	-0	8
	13	8	54	17	9	7	42		4	18	29	☾	20	25	38	☾	20	24	44	-0	54
	14	9	46	26	9	8	38		5	0	38	II	3	46	48	II	3	44	49	-1	59
	15	10	43	7	9	9	34		5	13	6	II	17	33	14	II	17	30	34	-2	40
	17	12	46	17	9	11	27		6	9	1	☾	16	13	35	☾	16	10	40	-2	55

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.									
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"		
Dec.	18	13	45	21	9	12	23	6	22	23	♌	0	55	37	♌	0	52	36	—3	1
	19	14	41	4	9	13	20	7	6	0	♌	15	42	40	♌	15	40	35	—2	5
	21	16	22	42	9	15	12	8	3	37	♍	15	15	28	♍	15	13	11	—2	17
	25	19	38	36	9	18	56	9	28	32	♍	13	17	18	♍	13	14	43	—2	35
Dec.	26	20	32	53	9	19	52	10	11	47	♍	27	31	48	♍	27	29	2	—2	46

Anno JULIANO MDCCXXVIII. Currente.

Jan.	3	2	39	45	9	26	24	1	6	34	♋ 0 59 50	♋ 0 58 31	—1	19
	8	5	59	17	10	1	2	3	3	10	♋ 1 58 40	♋ 1 59 32	+0	52
	9	6	44	9	10	1	58	3	14	54	♋ 14 32 55	♋ 14 33 9	+0	14
	10	7	33	14	10	2	54	3	26	55	♋ 27 28 32	♋ 27 28 2	—0	30
	11	8	27	3	10	3	50	4	9	16	♌ 10 50 30	♌ 10 49 12	—1	18
	12	9	25	5	10	4	46	4	21	59	♌ 24 41 9	♌ 24 39 20	—1	49
	14	11	26	37	10	6	39	5	18	30	♌ 23 44 54	♌ 23 42 55	—1	59
	15	12	27	32	10	7	35	6	2	15	♌ 8 49 10	♌ 8 47 57	—1	13
	16	13	22	53	10	8	31	6	16	11	♌ 24 3 2	♌ 24 2 27	—0	35
	17	14	15	6	10	9	27	7	0	16	♍ 9 19 44	♍ 9 19 39	—0	5
	19	15	54	16	10	11	18	7	28	31	♍ 9 34 25	♍ 9 34 13	—0	12
	:: 20	16	46	14	10	12	14	8	12	31	♍ 24 26 18	♍ 24 23 58	—2	20
	21	17	35	10	10	13	10	8	26	15	♍ 8 58 56	♍ 8 55 43	—3	13
	23	19	24	54	10	15	2	9	22	56	♎ 7 21 25	♎ 7 16 22	—5	3
Jan.	24	20	22	20	10	15	57	10	5	45	♎ 21 8 43	♎ 21 4 13	—4	30
Feb.	3	3	14	32	10	24	16	1	19	15	♏ 15 1 50	♏ 14 59 53	—1	57
	4	3	54	58	10	25	11	2	0	35	♏ 27 11 24	♏ 27 10 0	—1	24
	5	4	37	50	10	26	7	2	11	54	♏ 9 28 52	♏ 9 28 24	—0	28
Cent.::	8	7	10	34	10	28	53	3	18	1	♏ 18 8 3	♏ 18 7 46	—0	17
Cent.::	9	8	9	54	10	29	48	4	0	50	♏ 1 51 46	♏ 1 52 9	+0	23
	10	9	7	0	11	0	44	4	14	6	♏ 16 4 3	♏ 16 4 20	+0	17
Cent.::	13	11	58	53	11	3	31	5	25	46	♏ 1 22 30	♏ 1 23 25	+0	55
Cent.	14	12	52	20	11	4	26	6	10	7	♏ 16 59 54	♏ 17 1 48	+1	54
	:: 17	15	29	45	11	7	12	7	23	8	♏ 3 25 5	♏ 3 25 27	+0	22
	18	16	22	7	11	8	7	8	7	4	♏ 18 18 30	♏ 18 16 42	—1	48
	19	17	18	56	11	9	2	8	20	41	♏ 2 48 31	♏ 2 45 24	—3	7

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXVIII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.			
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	Q.	'	"	'	"		
<i>Mart.</i>																				
2	1	53	21		11	19	5	0	29	18	Υ	23	0	6	Υ	22	55	45	—4	21
6	5	0	12		11	22	43	2	15	19	Π	12	58	32	Π	12	57	17	—1	15
7	5	55	27		11	23	38	2	27	39	Π	26	8	58	Π	26	8	20	—0	38
8	6	52	39		11	24	33	3	10	25	☾	9	42	49	☾	9	42	55	+0	6
9	7	50	11		11	25	27	3	23	36	☾	23	44	20	☾	23	43	44	—0	36
11	9	40	55		11	27	17	4	21	9	♈	23	9	5	♈	23	8	37	—0	28
12	10	33	32		11	28	11	5	5	23	♉	8	29	5	♉	8	29	13	+0	8
13	11	25	5		11	29	6	5	19	51	♉	24	6	31	♉	24	8	12	+1	41
17	15	6	13		0	2	44	7	17	25	♊	26	33	22	♊	26	34	50	+1	28
18	16	6	13		0	3	38	8	1	12	♊	11	20	26	♊	11	21	13	+0	47
19	17	6	26		0	4	33	8	14	34	♊	25	38	44	♊	25	36	57	—1	47
23	20	34	53		0	8	10	10	3	47	♋	18	10	4	♋	18	6	5	—3	59
<i>Mart.</i>																				
24	21	17	28		0	9	4	10	15	12	♋	0	30	35	♋	0	26	34	—4	1
<i>Apri.</i>																				
2	2	55	55		0	16	13	1	14	24	♌	8	51	2	♌	8	48	44	—2	18
6	6	36	19		0	19	49	3	4	25	♌	2	21	47	♌	2	21	3	—0	44
7	7	29	27		0	20	43	3	17	55	♌	16	35	25	♌	16	34	43	—0	42
10	10	1	23		0	23	24	5	0	15	♍	1	37	36	♍	1	37	13	—0	23
11	10	53	6		0	24	18	5	14	43	♍	17	15	24	♍	17	15	45	+0	21
<i>Cent.</i>																				
12	11	48	32		0	25	12	5	29	12	♍	2	59	13	♍	3	1	25	+2	12
14	13	48	17		0	26	59	6	27	41	♎	4	3	38	♎	4	6	27	+2	49
15	14	50	33		0	27	53	7	11	30	♎	19	2	24	♎	19	4	57	+2	33
17	16	49	48		0	29	41	8	7	54	♏	17	26	20	♏	17	24	38	—1	42
18	17	42	55		1	0	34	8	20	27	♏	0	48	53	♏	0	45	53	—3	0
21	19	56	30		1	3	14	9	25	57	♐	8	34	51	♐	8	30	36	—4	15
22	20	35	51		1	4	7	10	7	15	♐	20	43	50	♐	20	39	48	—4	2
23	21	14	33		1	5	0	10	18	25	Υ	2	49	10	Υ	2	46	1	—3	9
24	21	53	42		1	5	52	10	29	30	Υ	14	55	48	Υ	14	53	16	—2	32
<i>Apri.</i>																				
30	1	45	27		1	10	18	0	26	16	♐	17	45	38	♐	17	42	23	—3	15
<i>Maii.</i>																				
4	5	24	20		1	13	51	2	16	32	♑	11	49	51	♑	11	50	6	+0	15
5	6	14	48		1	14	44	2	29	57	♑	25	57	30	♑	25	57	30	+0	0
6	7	3	39		1	15	37	3	13	41	♒	10	22	18	♒	10	22	8	—0	10
7	7	52	0		1	16	30	3	27	44	♒	25	6	21	♒	25	5	0	—1	21
8	8	41	11		1	17	23	4	11	50	♒	10	7	27	♒	10	6	12	—1	15
9	9	32	39		1	18	16	4	26	5	♓	25	23	49	♓	25	22	43	—1	6

LUNÆ MERIDIANÆ LONGITUDINES
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Anno JULIANO MDCCXXVIII. Currente.

Transitus Limbi Lunæ T. æq.	Argument. Annuum.	Distantia ☾ à ☼	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.
M. D. H. / //	S. O. /	S. O. /	O. / //	O. / //	/ //
<i>Maii.</i> 10 10 27 30	1 19 9	5 10 20	♌ 10 48 16	♌ 10 48 24	+0 8
<i>Cent.</i> 24 21 58 15	2 1 28	11 3 8	♍ 17 28 28	♍ 17 24 24	-4 4
<i>Junii.</i> 1 4 12 16	2 7 38	1 29 28	♎ 21 42 25	♎ 21 43 56	+1 31
4 6 36 12	2 10 16	3 10 32	♏ 4 55 22	♏ 4 55 7	-0 15
5 7 25 10	2 11 8	3 24 32	♏ 19 40 25	♏ 19 39 46	-0 39
6 8 16 57	2 12 1	4 8 33	♐ 4 34 50	♐ 4 34 0	-0 50
9 11 13 47	2 14 40	5 19 58	♐ 19 27 41	♐ 19 27 53	+0 12
<i>Cent.</i> 10 12 17 1	2 15 33	6 3 19	♑ 4 6 2	♑ 4 5 44	-0 18
15 16 28 33	2 19 56	8 5 4	♑ 11 5 46	♑ 11 1 21	-4 25
16 17 8 27	2 20 48	8 16 39	♑ 23 27 36	♑ 23 22 35	-5 1
17 17 47 36	2 21 40	8 28 8	♒ 5 38 53	♒ 5 34 56	-3 57
21 20 40 10	2 25 10	10 14 7	♒ 25 0 43	♒ 24 57 47	-2 56
22 21 31 41	2 26 2	10 25 57	♓ 7 54 50	♓ 7 52 25	-2 25
23 22 26 45	2 26 55	11 8 1	♓ 21 9 6	♓ 21 6 54	-2 12
<i>Junii.</i> 30 3 46 38	3 2 12	1 26 11	♓ 15 57 12	♓ 16 0 9	+2 57
<i>Julii.</i> 2 5 22 27	3 3 57	2 23 55	♏ 15 11 35	♏ 15 14 41	+3 6
3 6 12 36	3 4 49	3 7 51	♏ 29 52 38	♏ 29 54 34	+1 56
5 8 2 31	3 6 35	4 5 29	♐ 29 13 5	♐ 29 13 57	+0 52
6 9 2 15	3 7 28	4 19 2	♐ 13 47 42	♐ 13 48 13	+0 31
8 11 2 34	3 9 14	5 15 15	♑ 12 21 31	♑ 12 22 16	+0 45
12 14 22 55	3 12 45	7 3 58	♑ 5 44 34	♑ 5 41 38	-2 56
13 15 3 52	3 13 37	7 15 31	♑ 18 18 8	♑ 18 14 23	-3 45
14 15 43 31	3 14 30	7 26 58	♒ 0 39 10	♒ 0 34 40	-4 30
18 18 31 40	3 18 0	9 12 47	♒ 19 40 20	♒ 19 36 39	-3 41
19 19 21 1	3 18 53	9 24 33	♓ 2 18 42	♓ 2 15 6	-3 36
21 21 10 15	3 20 39	10 18 54	♓ 28 36 0	♓ 28 33 3	-2 57
22 22 7 47	3 21 32	11 1 32	♏ 12 19 35	♏ 12 17 11	-2 24
28 2 29 49	3 25 57	1 8 57	♏ 25 25 0	♏ 25 29 39	+4 39
<i>Julii.</i> 31 5 2 0	3 28 36	2 21 5	♐ 10 10 15	♐ 10 14 0	+3 45
<i>Aug.</i> 1 5 57 44	3 29 29	3 4 57	♐ 24 50 30	♐ 24 52 52	+2 22
2 6 56 10	4 0 22	3 18 36	♑ 9 18 58	♑ 9 20 32	+1 34
4 8 54 57	4 2 9	4 14 58	♑ 7 32 3	♑ 7 34 14	+2 11
5 9 51 16	4 3 2	4 27 36	♒ 21 14 15	♒ 21 16 49	+2 34
6 10 43 39	4 3 56	5 9 54	♒ 4 40 21	♒ 4 41 56	+1 35

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Anno JULIANO MDCCXXVIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.						
M.	D.	H.	'	"	S.	O.	'	"	S.	O.	'	"	S.	O.	'	"	'	"			
Aug.	11	14	19	38	4	8	20		7	7	34	Υ	8	4	56	Υ	8	1	20	-3	36
	12	14	59	38	4	9	13		7	18	46	Υ	20	16	42	Υ	20	13	11	-3	31
	18	19	53	0	4	14	33		9	29	11	☾	5	53	38	☾	5	49	53	-3	45
:: 26 2 1 19					4	20	48		1	4	58	☿	19	25	10	☿	19	27	22	+2	12
Aug.	29	4	49	58	4	23	30		2	17	28	♄	4	44	42	♄	4	48	57	+4	15
Cent.	6	11	37	20	5	0	40		5	26	19	♄	21	20	47	♄	21	21	29	+0	42
Sept.	7	12	17	50	5	1	34		6	7	25	Υ	3	39	31	Υ	3	39	21	-0	10
	8	12	57	32	5	2	28		6	18	26	Υ	15	52	53	Υ	15	51	53	-1	0
	11	15	7	12	5	5	9		7	21	44	☿	22	31	32	☿	22	29	32	-2	0
	12	15	56	0	5	6	3		8	3	10	♄	4	54	13	♄	4	53	5	-1	8
:: 13 16 47 45					5	6	57		8	14	51	♄	17	28	7	♄	17	27	36	-0	31
:: 14 17 41 45					5	7	51		8	26	51	☾	0	19	4	☾	0	17	51	-1	13
	15	18	36	38	5	8	46		9	9	13	☾	13	29	41	☾	13	27	32	-2	9
	16	19	31	8	5	9	40		9	21	59	☾	27	3	6	☾	27	0	35	-2	31
	19	22	6	50	5	12	23		11	2	35	♄	10	30	20	♄	10	27	8	-3	12
25 2 37 39					5	16	56		1	14	36	♄	28	38	58	♄	28	41	38	+2	40
28 5 41 17					5	19	41		2	25	51	♄	12	37	21	♄	12	39	8	+1	47
Sept.	29	6	36	25	5	20	35		3	8	44	♄	26	17	6	♄	26	17	55	+0	49
Oct.	:: 1 8 11 30				5	22	24		4	3	11	☿	22	19	56	☿	22	21	39	+1	43
	:: 5 10 55 42				5	26	2		5	18	24	Υ	11	48	11	Υ	11	49	35	+1	24
Cent.	6 11 36 7				5	26	56		5	29	20	Υ	23	58	53	Υ	23	59	55	+1	2
	:: 8 13 3 21				5	28	45		6	21	14	☿	18	27	31	☿	18	26	28	-1	3
	9	13	52	16	5	29	40		7	2	22	♄	0	48	36	♄	0	47	13	-1	23
	10	14	42	51	6	0	35		7	13	42	♄	13	15	40	♄	13	15	10	-0	30
	11	15	35	35	6	1	30		7	25	17	♄	25	52	58	♄	25	52	59	+0	1
Cent.	:: 14 18 13 17				6	4	15		9	2	5	☿	5	11	23	☿	5	11	9	-0	14
Octo.	31	8	14	50	6	18	59		4	6	34	♄	25	36	25	♄	25	35	46	-0	39
Nov.	1 8 54 2				6	19	56		4	17	45	Υ	7	47	4	Υ	7	47	44	+0	40
	:: 5 11 46 44				6	23	37		6	1	49	☿	26	45	20	☿	26	45	18	-0	2
	6	12	39	9	6	24	33		6	13	0	♄	9	16	44	♄	9	16	0	-0	44
Sept.	7	13	29	22	6	25	28		6	24	21	♄	21	54	12	♄	21	53	11	-1	1
	8	14	25	10	6	26	24		7	5	58	☾	4	42	42	☾	4	42	10	-0	32
Cent.	:: 9 15 17 9				6	27	20		7	17	50	☾	17	38	44	☾	17	39	32	+0	48
	11 16 59 53				6	29	11		8	12	37	☿	14	12	7	☿	14	12	13	+0	6

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Anno JULIANO MDCCXXVIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.
M.	D.	H.	'	"	s.	o.	'	"	o.	'	"
Nov.	12	17	47	57	7	0	7	8 25 33	♌ 27 53 28	♌ 27 53 57	+0 29
	13	18	35	5	7	1	3	9 8 52	♍ 11 56 13	♍ 11 55 13	-1 0
	16	21	3	21	7	3	49	10 20 43	♎ 26 31 18	♎ 26 27 12	-4 6
	23	3	8	42	7	9	27	1 14 54	♏ 28 25 37	♏ 28 23 52	-1 45
	26	5	31	29	7	12	14	2 22 26	♐ 8 32 46	♐ 8 29 33	-3 13
	28	6	51	57	7	14	5	3 15 46	♑ 3 25 0	♑ 3 22 34	-2 26
	29	7	31	38	7	15	1	3 27 7	♑ 15 35 47	♑ 15 34 56	-0 51
Nov.	30	8	12	36	7	15	56	4 8 19	♑ 27 45 35	♑ 27 45 31	-0 4
Dec.	1	8	55	47	7	16	52	4 19 29	♒ 9 59 2	♒ 9 59 1	-0 1
	3	10	31	14	7	18	44	5 11 52	♒ 4 49 39	♒ 4 48 53	-0 46
Cent.	5	12	18	31	7	20	36	6 4 47	♓ 0 23 59	♓ 0 22 42	-1 17
	7	14	6	46	7	22	28	6 28 34	♓ 26 43 29	♓ 26 42 1	-1 28
	8	14	57	27	7	23	24	7 10 53	♓ 10 8 6	♓ 10 7 26	-0 40
	10	16	32	41	7	25	16	8 6 28	♐ 7 32 8	♐ 7 32 25	+0 17
	11	17	18	50	7	26	12	8 19 44	♐ 21 35 17	♐ 21 34 49	-0 28
	12	18	5	43	7	27	8	9 3 17	♑ 5 55 15	♑ 5 53 3	-2 12
	13	18	54	37	7	28	4	9 17 6	♑ 20 32 22	♑ 20 28 47	-3 35
	15	20	43	47	7	29	56	10 15 12	♒ 20 34 55	♒ 20 30 42	-4 13
Dec.	30	8	23	19	8	13	1	4 9 40	♒ 29 48 50	♒ 29 47 21	-1 29

Anno JULIANO MDCCXXIX. Currente.

Jan.	1	10	7	52	8	14	53	5 2 47	♒ 25 12 36	♒ 25 12 9	-0 27
Cent.	3	12	1	40	8	16	45	5 26 42	♓ 21 41 18	♓ 21 40 24	-0 54
	7	15	17	14	8	20	29	7 17 34	♐ 17 17 12	♐ 17 15 8	-2 4
	12	19	34	24	8	25	8	9 26 12	♑ 0 15 42	♑ 0 9 36	-6 6
	25	5	28	15	9	6	17	2 25 13	♒ 12 16 20	♒ 12 16 20	+0 0
	26	6	14	41	9	7	13	3 6 38	♒ 24 32 54	♒ 24 33 7	+0 13
	27	7	4	14	9	8	8	3 18 10	♒ 6 56 5	♒ 6 57 15	+1 10
Cent.	28	7	57	23	9	9	4	3 29 51	♒ 19 33 7	♒ 19 33 37	+0 30
Jan.	30	9	44	32	9	10	55	4 23 49	♓ 15 34 34	♓ 15 35 35	+1 1
Cent.	1	11	31	12	9	12	46	5 18 50	♓ 12 58 22	♓ 12 59 4	+0 42
Feb.	2	12	22	20	9	13	42	6 1 47	♓ 27 10 19	♓ 27 10 52	+0 33
	4	13	59	8	9	15	33	6 28 28	♐ 26 20 37	♐ 26 20 20	-0 17

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXIX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	"	O.	'	"	Q.	'	"	'	"
Feb.	5	14	48	0	9	16	28		7	12	41	☿ 11	11	22	—1	9
	6	15	38	43	9	17	24		7	26	3	☿ 26	5	43	—1	58
	9	18	29	14	9	20	10		9	7	51	☿ 10	33	0	—6	8
	10	19	30	24	9	21	6		9	21	33	☿ 25	4	41	—5	56
	11	20	30	40	9	22	2	10	4	58		☿ 9	24	52	—6	21
	12	21	27	46	9	22	57	10	18	4		☿ 23	29	10	—5	9
Feb.	25	6	38	18	10	3	56	3	8	34		☿ 26	41	33	+2	9
	26	7	31	37	10	4	51	3	20	33		☿ 9	29	28	+2	28
	27	8	24	43	10	5	46	4	2	49		☿ 22	37	0	+2	44
	28	9	16	46	10	6	41	4	15	23		☿ 6	8	22	+2	24
	Mart.	2	10	56	54	10	8	30	5	11	32	☿ 4	29	55	+3	24
		5	13	29	17	10	11	15	6	23	2	☿ 19	48	17	+0	31
Mart.	23	3	39	5	10	26	39	1	25	0		☿ 9	27	45	—1	5
	25	5	22	20	10	28	27	2	18	6		☿ 4	17	33	+1	23
	30	9	32	23	11	2	57	4	21	20		☿ 11	38	0	+0	57
	Apri.	2	12	5	41	11	5	39	6	3	33	☿ 27	30	42	+0	31
		4	14	7	35	11	7	27	7	2	37	☿ 29	10	22	+0	36
		5	15	11	49	11	8	22	7	17	3	☿ 14	44	7	—0	1
Apri.	19	1	34	53	11	19	57	0	24	41		☿ 5	19	9	—3	7
	22	4	8	29	11	22	37	1	28	47		☿ 12	29	46	—0	42
	23	4	58	57	11	23	31	2	10	38		☿ 25	9	53	+0	50
	28	8	57	28	11	27	56	4	15	34		☿ 3	59	26	—0	5
	29	9	48	40	11	28	50	4	29	44		☿ 19	15	5	—1	3
	Maii.	2	12	51	8	0	1	30	6	13	31	☿ 6	54	54	+1	12
		7	17	47	34	0	5	57	8	22	50	☿ 21	8	45	—5	20
		9	19	15	8	0	7	43	9	17	34	☿ 17	19	43	—5	58
Maii.	18	1	13	9	0	14	44	0	17	37		☿ 26	3	35	—1	42
	19	2	4	52	0	15	37	0	28	57		☿ 8	31	6	—1	42
	20	2	55	34	0	16	30	1	10	31		☿ 21	8	5	—0	16
	24	6	6	48	0	20	1	2	29	58		☿ 13	47	55	+0	28
	26	7	37	3	0	21	46	3	26	58		☿ 12	20	27	—1	36
	29	10	26	23	0	24	25	5	9	58		☿ 28	35	13	—3	34
Cent.	30	11	33	16	0	25	18	5	24	35		☿ 14	29	17	—2	35
Cent.	31	12	40	5	0	26	11	6	9	5		☿ 0	16	43	—1	54

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Anno JULIANO MDCCXXIX. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"
<i>Junii.</i>					0	27	57	7	7	15	☾ 0	45	3	☾ 0	42	39	—2	24
	3	15	38	10	0	28	50	7	20	44	☾ 15	10	47	☾ 15	7	45	—3	2
	4	16	26	38	0	29	43	8	3	46	☾ 29	3	16	☾ 28	59	56	—3	20
	5	17	11	12	1	0	35	8	16	23	☾ 12	26	43	☾ 12	22	23	—4	20
	6	17	53	18	1	1	27	8	28	37	☾ 25	24	25	☾ 25	20	6	—4	19
	7	18	34	26	1	2	20	9	10	31	☾ 8	3	32	☾ 7	59	31	—4	1
	10	20	42	49	1	4	57	10	14	49	☾ 15	0	20	☾ 14	59	2	—1	18
	11	21	29	55	1	5	49	10	26	0	☾ 27	15	17	☾ 27	14	30	—0	47
	17	1	42	12	1	10	12	0	22	49	☾ 29	55	31	☾ 29	55	29	—0	2
	18	2	30	14	1	11	5	1	4	44	☾ 12	54	22	☾ 12	54	30	+0	8
	22	5	32	19	1	14	35	2	25	44	☾ 7	15	50	☾ 7	15	33	—0	17
	24	7	13	16	1	16	20	3	23	19	☾ 6	27	15	☾ 6	25	2	—2	13
	25	8	10	34	1	17	13	4	7	31	☾ 21	35	24	☾ 21	32	0	—3	24
	26	9	12	36	1	18	6	4	21	51	☾ 6	58	42	☾ 6	55	26	—3	16
	28	11	23	0	1	19	52	5	20	28	☾ 7	58	53	☾ 7	55	27	—3	26
	29	12	27	28	1	20	45	6	4	30	☾ 23	14	0	☾ 23	11	20	—2	40
<i>Junii.</i>	30	13	24	17	1	21	38	6	18	11	☾ 8	4	57	☾ 8	2	45	—2	12
<i>Julii.</i>					1	22	31	7	1	29	☾ 22	28	50	☾ 22	26	35	—2	15
	2	15	3	8	1	23	23	7	14	24	☾ 6	24	22	☾ 6	21	26	—2	56
	11	21	56	15	2	1	16	10	29	54	☾ 29	52	40	☾ 29	52	46	+0	6
	21	5	8	42	2	9	11	2	22	25	☾ 1	44	26	☾ 1	45	7	+0	41
	22	6	3	0	2	10	4	3	6	19	☾ 16	25	28	☾ 16	25	48	+0	20
	23	7	1	46	2	10	57	3	20	22	☾ 1	19	11	☾ 1	17	57	—1	14
	26	10	9	36	2	13	37	5	2	27	☾ 16	21	44	☾ 16	19	24	—2	20
	27	11	7	56	2	14	30	5	16	5	☾ 1	9	20	☾ 1	6	40	—2	40
<i>Julii.</i>	28	12	1	37	2	15	23	5	29	25	☾ 15	40	6	☾ 15	37	10	—2	56
<i>Aug.</i>					2	19	47	8	1	17	☾ 22	52	49	☾ 22	51	41	—1	8
	3	16	32	5	2	20	40	8	12	57	☾ 5	25	29	☾ 5	23	47	—1	42
	6	18	55	42	2	23	19	9	17	27	☾ 12	23	40	☾ 12	23	17	—0	23
	10	22	21	6	2	26	52	11	4	20	☾ 3	6	3	☾ 3	5	49	—0	14
	17	3	5	32	3	2	11	1	21	41	☾ 27	16	24	☾ 27	19	28	+3	4
	18	3	59	6	3	3	5	2	5	30	☾ 12	1	38	☾ 12	3	49	+2	11
	19	4	56	24	3	3	59	2	19	28	☾ 26	49	54	☾ 26	52	01	+2	7
	21	6	59	9	3	5	46	3	17	27	☾ 26	24	58	☾ 26	25	19	+0	21

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Anno JULIANO MDCCXXIX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☼	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.	
M.	D.	H.	'	"	S.	O.	'	"	'	"
Aug.	22	8	0	24	3	6	40	4	1	16
	24	9	52	44	3	8	28	4	28	7
	25	10	42	42	3	9	21	5	11	3
	26	11	29	18	3	10	15	5	23	39
	27	12	15	48	3	11	8	6	5	58
	29	13	41	52	3	12	55	6	29	47
	30	14	25	36	3	13	49	7	11	23
Aug.	31	15	10	55	3	14	42	7	22	53
Sept.	1	15	58	10	3	15	36	8	4	19
	2	16	47	21	3	16	29	8	15	44
	4	18	29	30	3	18	17	9	8	46
	7	20	59	50	3	20	59	10	14	35
	8	21	47	30	3	21	53	10	27	1
	20	7	48	22	4	1	50	3	27	11
	21	8	38	35	4	2	44	4	10	11
	22	9	25	19	4	3	39	4	22	50
	23	10	9	33	4	4	33	5	5	7
	24	10	52	27	4	5	27	5	17	5
	26	12	20	25	4	7	16	6	10	19
	27	13	5	6	4	8	10	6	21	40
	28	13	51	44	4	9	4	7	2	55
	29	14	40	13	4	9	59	7	14	9
Sept.	30	15	30	18	4	10	53	7	25	24
Octo.	2	17	11	53	4	12	43	8	18	13
	3	18	1	35	4	13	38	8	29	53
	5	19	37	0	4	15	27	9	24	0
	6	20	23	20	4	16	21	10	6	33
	7	21	9	37	4	17	16	10	19	28
	8	21	57	4	4	18	11	11	2	45
	15	3	46	6	4	23	42	1	27	45
Cent.	18	6	37	28	4	26	28	3	8	52
	19	7	23	53	4	27	23	3	21	46
	20	8	9	20	4	28	18	4	4	16
	21	8	51	2	4	29	13	4	16	22

**LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXIX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.			
M.	D.	H.	'	"	S.	O.	'	Q.	'	"	'	"
O cto .	24	10	59	24	5	1	58	♄ 3 14 45	♄ 3 17 8		+2	23
	28	14	15	20	5	5	39	♄ 22 38 46	♄ 22 39 46		+1	0
	30	15	55	34	5	7	30	♄ 17 9 30	♄ 17 10 30		+1	0
O cto .	31	16	43	36	5	8	25	♄ 29 32 18	♄ 29 33 44		+1	26
Nov.	1	17	29	56	5	9	21	♄ 12 7 7	♄ 12 8 27		+1	20
	2	18	15	6	5	10	16	♄ 25 0 12	♄ 25 0 16		+0	4
	4	19	45	2	5	12	7	♄ 22 2 27	♄ 21 59 55		-2	32
	5	20	32	14	5	13	2	♄ 6 21 15	♄ 6 17 13		-4	2
:: 16 6 6 32					5	22	21	♄ 7 46 14	♄ 7 44 0		-2	14
17 6 50 8					5	23	17	♄ 21 2 58	♄ 21 0 46		-2	12
19 8 14 30					5	25	8	♄ 16 41 36	♄ 16 42 24		+0	48
20 8 57 36					5	26	4	♄ 29 13 49	♄ 29 15 27		+1	38
21 9 42 24					5	26	59	♄ 11 38 48	♄ 11 41 11		+2	23
22 10 29 21					5	27	55	♄ 23 59 37	♄ 24 1 36		+1	59
23 11 18 20					5	28	51	♄ 6 17 22	♄ 6 18 43		+1	21
25 13 1 47					6	0	43	♄ 0 49 38	♄ 0 50 7		+0	29
27 14 40 23					6	2	34	♄ 25 26 53	♄ 25 26 9		-0	44
28 15 26 55					6	3	30	♄ 7 52 56	♄ 7 52 24		-0	32
Nov.	29	16	11	38	6	4	26	♄ 20 28 26	♄ 20 28 37		+0	11
Dec.	1	17	38	48	6	6	17	♄ 16 30 22	♄ 16 29 42		-0	40
	2	18	23	20	6	7	13	♄ 0 6 25	♄ 0 4 41		-1	44
	4	20	1	12	6	9	5	♄ 28 51 21	♄ 28 45 59		-5	22
14 4 45 33					6	17	32	♄ 15 58 19	♄ 15 57 3		-1	16
15 5 29 24					6	18	27	♄ 29 23 4	♄ 29 20 55		-2	9
19 8 26 0					6	22	11	♄ 19 54 56	♄ 19 55 50		+0	54
21 10 4 10					6	24	2	♄ 14 26 5	♄ 14 27 20		+1	15
22 10 55 1					6	24	58	♄ 26 42 2	♄ 26 42 54		+0	52
28 15 37 23					7	0	34	♄ 12 17 50	♄ 12 16 2		-1	48
29 16 20 46					7	1	30	♄ 25 34 19	♄ 25 32 36		-1	43
Dec.	30	17	5	37	7	2	26	♄ 9 10 49	♄ 9 8 25		-2	24

Anno JULIANO MDCCXXX. Currente.

Jan. 1 18 44 56 | 7 4 17 | 9 14 51 | ♄ 7 34 42 | ♄ 7 29 56 | -4 46

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.						
M.	D.	H.	'	"	S.	O.	'	"	°	'	"	°	'	"	'	"					
Jan.	13	4	50	10	7	14	35		2	15	13	Υ	20	1	35	Υ	20	1	29	—0	6
	14	5	34	52	7	15	30		2	27	10	♄	2	49	26	♄	2	49	50	+0	24
	15	6	20	57	7	16	26		3	8	52	♄	15	21	47	♄	15	22	21	+0	34
	16	7	8	49	7	17	22		3	20	21	♄	27	43	56	♄	27	44	21	+0	25
	18	8	48	53	7	19	13		4	12	56	♄	22	13	55	♄	22	15	2	+1	7
	21	11	18	15	7	22	0		5	16	41	♄	29	24	9	♄	29	23	48	—0	21
	25	14	19	55	7	25	42		7	3	48	♄	21	26	30	♄	21	22	59	—3	31
	27	15	51	3	7	27	33		7	29	7	♄	18	53	7	♄	18	48	56	—4	11
	28	16	40	46	7	28	29		8	12	18	♄	3	0	0	♄	2	55	18	—4	42
	29	17	34	33	7	29	25		8	25	50	♄	17	23	25	♄	17	17	42	—5	43
Jan.	30	18	32	39	8	0	21		9	9	40	♄	2	1	45	♄	1	55	39	—6	6
Feb.	9	2	41	30	8	8	41		1	11	38	Υ	13	54	15	Υ	13	54	47	+0	32
	10	3	26	57	8	9	36		1	23	49	Υ	27	8	43	Υ	27	9	54	+1	11
	14	6	41	2	8	13	17		3	10	31	♄	17	22	16	♄	17	23	22	+1	6
	15	7	31	44	8	14	12		3	21	56	♄	29	36	15	♄	29	38	6	+1	51
	16	8	23	8	8	15	7		4	3	21	♄	11	54	21	♄	11	55	55	+1	34
	17	9	11	1	8	16	2		4	14	48	♄	24	18	50	♄	24	19	56	+1	6
	20	11	29	14	8	18	47		5	20	1	♄	2	56	5	♄	2	54	44	—1	21
	21	12	15	54	8	19	42		6	2	13	♄	16	24	42	♄	16	22	25	—2	17
	23	13	47	53	8	21	31		6	27	28	♄	14	13	33	♄	14	10	6	—3	27
Feb.	24	14	37	32	8	22	26		7	10	35	♄	28	32	16	♄	28	27	25	—4	51
Mart.	13	4	32	13	9	7	2		2	7	58	♄	12	15	18	♄	12	16	30	+1	12
	15	6	13	22	9	8	51		3	0	54	♄	6	46	30	♄	6	48	30	+2	0
	16	7	2	31	9	9	45		3	12	25	♄	19	2	20	♄	19	4	51	+2	31
	17	7	50	9	9	10	40		3	24	02	♄	1	26	55	♄	1	28	48	+1	53
	19	9	21	14	9	12	28		4	17	48	♄	27	1	21	♄	27	1	55	+0	34
	20	10	5	46	9	13	22		5	0	1	♄	10	19	29	♄	10	19	48	+0	19
	21	10	50	53	9	14	16		5	12	33	♄	24	3	45	♄	24	2	24	—1	21
	22	11	38	45	9	15	10		5	25	24	♄	8	11	55	♄	8	10	16	—1	39
	23	12	29	25	9	16	4		6	8	35	♄	22	42	44	♄	22	40	48	—1	56
	30	19	19	50	9	22	25		9	15	40	♄	6	35	38	♄	6	28	2	—7	36
Mart.	31	20	10	59	9	23	19		9	29	8	♄	20	49	52	♄	20	42	22	—7	30
Apri.	1	20	58	50	9	24	12		10	12	16	♄	4	50	46	♄	4	44	53	—5	53

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.		
M.	D.	H.	'	"	S.	o	'	S.	o	'	o	'	"	o	'	"	'	"	
Apri. 13					10	4	2	2	21	57	☾	26	18	53	☾	26	20	21	+1 28
15					10	5	49	3	15	26	☾	21	15	27	☾	21	16	41	+1 14
16					10	6	42	3	27	33	☾	4	10	26	☾	4	11	12	+0 46
17					10	7	35	4	9	58	☾	17	30	29	☾	17	30	41	+0 12
18					10	8	28	4	22	45	☾	1	19	32	☾	1	18	39	-0 53
19					10	9	22	5	5	53	☾	15	38	45	☾	15	37	22	-1 23
20					10	10	15	5	19	24	☾	0	26	40	☾	0	24	53	-1 47
21					10	11	9	6	3	17	☾	15	39	2	☾	15	37	51	-1 11
25					10	14	44	8	0	24	☾	17	14	18	☾	17	11	17	-3 1
26					10	15	37	8	14	29	☾	2	4	46	☾	2	0	55	-3 51
27					10	16	31	8	28	14	☾	16	33	0	☾	16	28	22	-4 38
28					10	17	24	9	11	40	☾	0	41	26	☾	0	35	51	-5 35
Apri. 29					10	18	17	9	24	42	☾	14	29	52	☾	14	24	59	-4 53
Maii. 11					10	28	0	2	2	26	☾	3	58	28	☾	4	2	18	+3 50
13					10	29	45	2	25	42	☾	28	50	17	☾	28	50	3	-0 14
14					11	0	37	3	7	48	☾	11	41	43	☾	11	40	59	-0 44
15					11	1	30	3	20	16	☾	24	57	46	☾	24	56	15	-1 31
16					11	2	23	4	3	9	☾	8	43	12	☾	8	40	57	-2 15
17					11	3	16	4	16	26	☾	23	1	18	☾	22	58	24	-2 54
19					11	5	2	5	14	16	☾	23	12	36	☾	23	9	20	-3 16
21					11	6	48	6	13	15	☾	24	44	35	☾	24	42	27	-2 8
22					11	7	42	6	27	54	☾	10	32	5	☾	10	31	21	-0 44
23					11	8	35	7	12	23	☾	26	3	21	☾	26	2	29	-0 52
24					11	9	28	7	26	36	☾	11	10	31	☾	11	9	21	-1 10
26					11	11	13	8	23	58	☾	10	4	32	☾	10	2	14	-2 18
27					11	12	6	9	7	2	☾	23	53	15	☾	23	50	27	-2 48
28					11	12	58	9	19	41	☾	7	19	34	☾	7	17	20	-2 14
Maii. 30					11	14	43	10	13	52	☾	3	21	22	☾	3	20	41	-0 40
Junii. 9					11	22	36	1	25	8	☾	24	26	59	☾	24	25	35	-1 24
10					11	23	28	2	6	49	☾	7	0	17	☾	6	57	23	-2 54
11					11	24	21	2	18	53	☾	19	50	2	☾	19	48	50	-1 12
13					11	26	6	3	14	9	☾	16	40	37	☾	16	38	54	-1 43
Cent. 18					0	0	31	5	24	31	☾	2	19	22	☾	2	15	48	-3 34
Cent. 19					0	1	24	6	9	13	☾	18	13	20	☾	18	11	6	-2 14

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.			
M.	H.	D.	'	"	S.	O.	'	S.	O.	'	☾	'	"	☾	'	"	'	"		
Junii. 21					0	3	10	7	8	7	☾	19	18	40	☾	19	18	27	—0	13
23					0	4	55	8	5	39	☾	18	39	4	☾	18	40	28	+1	24
28					0	9	17	10	7	26	☾	24	38	3	☾	24	38	30	+0	27
∴ 29					0	10	10	10	18	52	☾	7	2	2	☾	7	3	30	+1	28
Julii. 7					0	16	18	1	7	3	☾	3	1	10	☾	2	59	32	—1	38
14					0	22	26	4	6	54	☾	8	59	22	☾	8	54	56	—4	26
16					0	24	13	5	5	48	☾	9	58	21	☾	9	53	58	—4	23
Cent. 17					0	25	6	5	20	25	☾	25	43	19	☾	25	39	31	—3	48
19					0	26	52	6	19	7	☾	26	47	34	☾	26	46	24	—1	10
Cent. ∴ 21					0	28	38	7	16	34	☾	26	26	25	☾	26	25	3	—1	22
22					0	29	30	7	29	43	☾	10	32	25	☾	10	32	1	—0	24
23					1	0	23	8	12	29	☾	24	12	17	☾	24	10	2	—2	15
24					1	1	16	8	24	52	☾	7	22	34	☾	7	22	29	—0	5
25					1	2	9	9	6	55	☾	20	13	54	☾	20	13	38	—0	16
Julii. 26					1	3	2	9	18	42	☾	2	48	24	☾	2	49	10	+0	46
Aug. 6					1	11	51	1	13	3	☾	7	48	29	☾	7	48	27	—0	2
7					1	12	43	1	25	29	☾	21	14	57	☾	21	15	19	+0	22
11					1	16	17	3	19	4	☾	18	7	27	☾	18	5	50	—1	37
12					1	17	11	4	2	14	☾	3	7	43	☾	3	5	17	—2	26
13					1	18	4	4	17	33	☾	18	20	28	☾	18	17	53	—2	35
14					1	18	58	5	1	50	☾	3	40	5	☾	3	37	21	—2	44
15					1	19	51	5	16	1	☾	19	0	37	☾	18	57	38	—2	59
Cent. 16					1	20	45	6	0	0	☾	4	12	58	☾	4	10	52	—2	6
17					1	21	38	6	13	42	☾	19	9	41	☾	19	8	40	—1	1
18					1	22	32	6	27	4	☾	3	45	11	☾	3	44	14	—0	57
19					1	23	25	7	10	5	☾	17	54	55	☾	17	54	19	—0	36
20					1	24	18	7	22	45	☾	1	38	25	☾	1	37	38	—0	47
21					1	25	12	8	5	7	☾	14	56	19	☾	14	55	12	—1	7
23					1	26	59	8	29	0	☾	10	27	29	☾	10	26	31	—0	58
24					1	27	52	9	10	36	☾	22	50	15	☾	22	49	29	—0	46
25					1	28	46	9	22	4	☾	5	4	34	☾	5	4	17	—0	17
26					1	29	40	10	3	26	☾	17	15	57	☾	17	16	13	+0	16
28					2	1	26	10	26	6	☾	11	49	41	☾	11	50	18	+0	37
Aug. 29					2	2	20	11	7	32	☾	24	21	47	☾	24	22	4	+0	17

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.			
M.	D.	H.	'	"	S.	O.	'	Q.	'	"	'	"
Sept.	7	4	56	8	2	9	30	♏ 13 30 11	♏ 13 32 27		+ 2	16
	9	6	58	55	2	11	19	♏ 12 52 25	♏ 12 51 45		— 0	40
	13	10	33	36	2	14	55	♏ 12 10 31	♏ 12 10 19		— 0	12
	16	13	0	44	2	17	38	♏ 25 11 14	♏ 25 11 27		+ 0	13
Sept.	18	14	40	55	2	19	26	♏ 22 9 45	♏ 22 8 26		— 1	19
Octo.	3	1	50	54	3	2	8	♏ 24 20 9	♏ 24 20 5		— 0	4
	5	3	51	28	3	3	58	♏ 23 43 16	♏ 23 45 45		+ 2	29
	10	8	29	16	3	8	33	♏ 6 42 29	♏ 6 44 10		+ 1	41
	13	10	50	38	3	11	17	♏ 19 7 27	♏ 19 9 44		+ 2	17
	15	12	30	33	3	13	7	♏ 16 18 38	♏ 16 19 57		+ 1	19
	21	17	31	7	3	18	38	♏ 1 41 44	♏ 1 39 44		— 2	0
	23	18	58	4	3	20	28	♏ 26 15 40	♏ 26 13 21		— 2	19
Octo.	26	21	7	17	3	23	12	♏ 5 12 2	♏ 5 8 18		— 3	44
Nov.	2	2	43	41	3	28	47	♏ 3 18 27	♏ 3 18 58		+ 0	31
	3	3	44	50	3	29	43	♏ 18 24 35	♏ 18 24 5		— 0	30
	4	4	42	11	4	0	38	♏ 3 18 22	♏ 3 19 37		+ 1	15
	5	5	35	30	4	1	34	♏ 17 58 45	♏ 17 59 12		+ 0	27
	6	6	25	16	4	2	30	♏ 2 23 28	♏ 2 23 46		+ 0	18
	7	7	12	40	4	3	25	♏ 16 34 13	♏ 16 34 59		+ 0	46
	9	8	45	11	4	5	16	♏ 14 16 39	♏ 14 18 46		+ 2	7
	10	9	32	20	4	6	12	♏ 27 48 31	♏ 27 52 5		+ 3	34
	11	10	21	11	4	7	7	♏ 11 9 54	♏ 11 12 37		+ 2	43
	13	12	5	40	4	8	59	♏ 7 13 3	♏ 7 14 32		+ 1	29
	17	15	25	16	4	12	42	♏ 26 53 43	♏ 26 51 55		— 1	48
	18	16	9	56	4	13	37	♏ 9 2 18	♏ 9 0 15		— 2	3
	19	16	52	40	4	14	33	♏ 21 12 45	♏ 21 10 54		— 1	51
	20	17	34	18	4	15	28	♏ 3 31 20	♏ 3 29 29		— 1	51
	22	18	58	8	4	17	19	♏ 28 57 11	♏ 28 53 3		— 4	8
	23	19	42	42	4	18	15	♏ 12 15 38	♏ 12 11 48		— 3	50
	24	20	30	39	4	19	11	♏ 26 3 27	♏ 25 59 14		— 4	13
Nov.	25	21	23	12	4	20	7	♏ 10 23 22	♏ 10 18 54		— 4	28
Dec.	1	2	31	18	4	24	48	♏ 27 14 18	♏ 27 14 28		+ 0	10
	5	5	57	16	4	28	33	♏ 26 18 28	♏ 26 18 48		+ 0	20
	8	8	17	54	5	1	20	♏ 6 56 26	♏ 6 58 7		+ 1	41

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXX. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.	
M.	D.	H.	'	"	S.	o	'	S.	o	'	o	'	"	q	'	"	'	"
Dec.	9	9	7	13	5	2	16	4	21	39	♌ 19	58	23	♌ 20	0	3	+1	40
	10	9	57	57	5	3	12	5	3	18	♌ 2	47	28	♌ 2	49	11	+1	43
	11	10	49	30	5	4	8	5	14	42	♌ 15	25	56	♌ 15	26	58	+1	2
	12	11	40	46	5	5	4	5	25	55	♌ 27	54	0	♌ 27	53	17	—0	43
	13	12	33	0	5	6	0	6	7	0	♌ 10	15	28	♌ 10	15	6	—0	22
	14	13	20	53	5	6	56	6	18	0	♌ 22	29	5	♌ 22	27	59	—1	6
	15	14	6	24	5	7	52	6	28	59	♌ 4	39	11	♌ 4	37	7	—2	4
	16	14	49	41	5	8	48	7	10	2	♌ 16	48	9	♌ 16	45	24	—2	45
	17	15	31	23	5	9	44	7	21	12	♌ 28	59	42	♌ 28	57	5	—2	37
Dec.	23	20	2	31	5	15	19	10	4	26	♌ 17	35	40	♌ 17	31	56	—3	44

Anno JULIANO MDCCXXXI. Currente.

Jan.	1	3	51	11	5	22	49	1	28	17	♌ 20 47 17	♌ 20 49 18	+2	1
	3	5	27	2	5	24	41	2	24	56	♌ 19 12 52	♌ 19 13 17	+0	25
	4	6	15	8	5	25	37	3	7	38	♌ 2 45 40	♌ 2 45 26	—0	14
	6	7	54	32	5	27	29	4	1	54	♌ 28 48 5	♌ 28 47 47	—0	18
	7	8	45	37	5	28	25	4	13	32	♌ 11 25 27	♌ 11 25 20	—0	7
	8	9	36	43	5	29	21	4	24	55	♌ 23 51 22	♌ 23 51 33	+0	11
	16	15	33	40	6	6	46	7	23	50	♌ 2 14 55	♌ 2 10 52	—4	3
	19	17	52	20	6	9	33	9	0	39	♌ 11 44 0	♌ 11 41 9	—2	51
	20	18	46	34	6	10	29	9	13	47	♌ 25 41 38	♌ 25 37 30	—4	8
	22	20	47	16	6	12	21	10	11	22	♌ 25 2 16	♌ 24 58 4	—4	12
Jan.	29	2	28	24	6	17	56	1	7	27	♌ 28 21 44	♌ 28 24 45	+3	1
Feb.	1	4	58	12	6	20	43	2	17	7	♌ 11 2 5	♌ 11 2 19	+0	14
	2	5	49	14	6	21	39	2	29	32	♌ 24 17 28	♌ 24 16 55	—0	33
	3	6	40	50	6	22	34	3	11	36	♌ 7 9 56	♌ 7 8 45	—1	11
	4	7	32	20	6	23	30	3	23	21	♌ 19 44 6	♌ 19 42 49	—1	17
	5	8	22	55	6	24	25	4	4	50	♌ 2 4 52	♌ 2 4 4	—0	48
	6	9	11	55	6	25	20	4	15	58	♌ 14 17 46	♌ 14 17 6	—0	40
	7	9	58	52	6	26	16	4	27	12	♌ 26 27 24	♌ 26 26 16	—1	8
	8	10	43	43	6	27	11	5	8	27	♌ 8 37 18	♌ 8 35 12	—2	6
	9	11	26	45	6	28	6	5	19	13	♌ 20 50 26	♌ 20 47 24	—3	2
	12	13	33	15	7	0	51	6	22	47	♌ 28 15 27	♌ 28 10 10	—5	17
	13	14	16	0	7	1	46	7	4	24	♌ 11 4 10	♌ 10 59 0	—5	10

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.												
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	"	S.	O.	'	"	'	"				
Mart.	2	4	31	55	7	16	28	2	8	46	II	1	53	56	II	1	55	4	+1	8	
	3	5	24	46	7	17	22	2	20	56	II	14	52	31	II	14	51	38	—0	53	
	5	7	6	34	7	19	12	3	14	35	☾	9	50	41	☾	9	49	42	—0	59	
	6	7	54	22	7	20	7	3	25	47	☾	22	2	57	☾	22	1	54	—1	3	
	7	8	39	57	7	21	1	4	7	3	☾	4	12	20	☾	4	11	26	—0	54	
	9	10	5	47	7	22	50	4	29	28	☾	28	40	45	☾	28	38	56	—1	49	
	10	10	47	20	7	23	44	5	10	43	☾	11	8	15	☾	11	5	14	—3	1	
	13	12	58	44	7	26	27	6	15	32	☾	19	50	28	☾	19	44	43	—5	45	
	14	13	46	21	7	27	21	6	27	39	☾	3	12	25	☾	3	7	1	—5	24	
	16	15	31	58	7	29	10	7	22	56	☾	0	39	35	☾	0	34	31	—5	4	
::	19	18	27	28	8	1	54	9	3	26	☾	13	30	28	☾	13	23	46	—6	42	
	22	21	12	19	8	4	37	10	15	33	☾	28	2	23	☾	27	57	10	—5	13	
Mart.	29	2	19	22	8	10	1	1	5	50	☾	25	41	34	☾	25	41	39	+0	5	
	30	3	13	24	8	10	56	1	18	12	II	9	6	29	II	9	5	52	—0	37	
	31	4	6	46	8	11	50	2	0	19	II	22	7	10	II	22	6	27	—0	43	
	Apri.	2	5	48	40	8	13	37	2	23	49	☾	17	9	43	☾	17	10	31	+0	48
		5	8	1	13	8	16	18	3	28	6	☾	23	47	56	☾	23	46	53	—1	3
Cent.	6	8	42	50	8	17	12	4	9	31	☾	6	8	48	☾	6	7	22	—1	26	
	9	10	51	2	8	19	52	5	14	36	☾	14	38	55	☾	14	36	24	—2	31	
	10	11	39	16	8	20	46	5	26	45	☾	28	6	40	☾	28	3	2	—3	38	
	12	13	25	40	8	22	33	6	22	2	☾	25	55	8	☾	25	50	54	—4	14	
	14	15	22	58	8	24	21	7	18	35	☾	24	35	28	☾	24	32	28	—3	0	
::	16	17	20	10	8	26	8	8	16	6	☾	23	44	31	☾	23	40	39	—3	52	
	Apri.	27	1	55	22	9	5	2	0	28	26	II	16	23	12	II	16	21	32	—1	40
Maii.	4	7	18	39	9	11	13	3	19	28	☾	13	22	23	☾	13	21	12	—1	11	
	5	8	0	10	9	12	6	4	1	10	☾	25	57	19	☾	25	56	31	—0	48	
	6	8	43	14	9	12	59	4	13	5	☾	8	51	17	☾	8	50	12	—1	5	
	7	9	28	55	9	13	52	4	25	16	☾	22	7	31	☾	22	5	51	—1	40	
	::	8	10	18	12	9	14	45	5	7	46	☾	5	47	37	☾	5	45	42	—1	55
		9	11	11	42	9	15	38	5	20	37	☾	19	51	50	☾	19	50	37	—1	13
	12	14	13	40	9	18	18	7	1	4	☾	3	53	54	☾	3	53	10	—0	44	
	13	15	13	37	9	19	11	7	15	2	☾	18	51	13	☾	18	50	56	—0	17	
	14	16	10	41	9	20	4	7	29	5	☾	3	48	1	☾	3	46	55	—1	6	
17	18	43	58	9	22	42	9	10	52	☾	17	54	54	☾	17	51	35	—3	19		

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.		
M.	H.	D.	'	"	S.	O.	'	"	°	'	"	'	"
Maii.	19	20	20	37	9	24	28	10	7	42	Υ 16 30 20	Υ 16 26 48	—3 32
	20	21	10	17	9	25	21	10	20	41	♄ 0 29 47	♄ 0 27 1	—2 46
	21	22	1	34	9	26	14	11	3	20	♄ 14 15 51	♄ 14 14 14	—1 37
Maii.	30	4	33	7	10	3	15	2	6	40	♄ 26 7 4	♄ 26 5 21	—1 43
	31	5	14	0	10	4	8	2	18	5	♄ 8 19 32	♄ 8 18 56	—0 36
	Junii.	1	5	54	43	10	5	0	2	29	38	♄ 20 40 5	♄ 20 39 50
Junii.	4	8	6	44	10	7	38	4	5	46	♄ 29 24 14	♄ 29 22 24	—1 50
	5	8	59	40	10	8	30	4	18	31	♄ 13 8 28	♄ 13 6 55	—1 33
	6	9	53	9	10	9	23	5	1	37	♄ 27 20 25	♄ 27 18 4	—2 21
Cent.	7	10	55	18	10	10	16	5	15	9	♄ 12 0 44	♄ 11 59 27	—1 17
	8	11	56	21	10	11	9	5	28	59	♄ 27 2 49	♄ 27 1 40	—1 9
	14	17	29	58	10	16	26	8	23	53	♄ 27 56 15	♄ 27 55 0	—1 15
Junii.	26	2	30	16	10	26	4	1	6	24	♄ 21 39 0	♄ 21 36 36	—2 24
	27	3	11	21	10	26	56	1	17	34	♄ 3 48 37	♄ 3 46 33	—2 4
	Julii.	2	6	46	15	11	1	18	3	16	24	♄ 6 54 5	♄ 6 52 55
Julii.	3	7	38	15	11	2	11	3	29	12	♄ 20 32 46	♄ 20 31 28	—1 18
	4	8	34	49	11	3	4	4	12	27	♄ 4 42 19	♄ 4 40 24	—1 55
	5	9	35	14	11	3	57	4	26	7	♄ 19 22 44	♄ 19 20 30	—2 14
Julii.	6	10	37	42	11	4	50	5	10	10	♄ 4 31 21	♄ 4 29 1	—2 20
	9	13	38	41	11	7	29	6	23	34	♄ 21 28 41	♄ 21 29 21	+0 40
	11	15	23	41	11	9	15	7	22	17	♄ 22 21 17	♄ 22 22 23	+1 6
Julii.	12	16	13	52	11	10	8	8	6	15	Υ 7 14 23	Υ 7 15 53	+1 30
	14	17	54	44	11	11	53	9	3	7	♄ 5 44 40	♄ 5 44 2	—0 38
	15	18	46	28	11	12	46	9	15	57	♄ 19 22 27	♄ 19 20 46	—1 41
Julii.	17	20	31	44	11	14	32	10	10	28	♄ 15 35 32	♄ 15 33 23	—2 9
	18	21	23	40	11	15	24	10	22	13	♄ 28 17 38	♄ 28 16 9	—1 29
	Cent.::	27	3	13	10	11	22	25	1	21	33	♄ 6 30 47	♄ 6 31 54
Julii.	28	3	54	59	11	23	18	2	3	9	♄ 19 4 16	♄ 19 5 1	+0 45
Cent.::	30	5	30	18	11	25	4	2	27	26	♄ 14 59 38	♄ 15 1 4	+1 26
Aug.::	2	8	18	51	11	27	44	4	7	5	♄ 27 1 57	♄ 27 0 13	—1 44
Aug.	4	10	20	21	11	29	30	5	5	30	♄ 27 27 50	♄ 27 25 1	—2 49
	6	12	14	42	0	1	3	6	4	37	♄ 29 4 56	♄ 29 1 27	—3 29
	8	14	3	13	0	3	4	7	3	33	Υ 0 28 45	Υ 0 28 18	—0 27
Aug.	9	14	55	12	0	3	57	7	17	37	Υ 15 39 2	Υ 15 38 31	—0 31

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.							
M.	D.	H.	'	"	S.	O.	'	O.	'	"	'	"				
Aug.	10	15	47	25	0	4	50	8	1	20	☾	0 19 36	☾	0 19 4	-0	32
	11	16	40	24	0	5	44	8	14	39	☾	14 30 49	☾	14 28 28	-2	21
	13	18	27	19	0	7	30	9	10	3	☿	11 24 56	☿	11 22 0	-2	56
	25	2	38	33	0	17	17	1	14	44	☿	27 48 28	☿	27 49 3	+0	35
	27	4	16	19	0	19	3	2	8	58	☿	23 52 3	☿	23 53 9	+1	6
	28	5	10	15	0	19	57	2	21	39	☿	7 19 31	☿	7 20 5	+0	34
Aug.	30	7	5	32	0	21	45	3	18	22	☿	5 28 5	☿	5 28 42	+0	37
Sept.	1	9	1	49	0	23	33	4	16	29	☿	5 20 53	☿	5 18 16	-2	37
	2	9	58	51	0	24	27	5	0	54	☿	20 50 12	☿	27 47 45	-2	27
	3	10	53	9	0	25	21	5	15	22	☿	6 32 58	☿	6 30 7	-2	51
Cent.	4	11	46	24	0	26	15	5	29	47	☿	22 18 1	☿	22 15 42	-2	19
Cent.	5	12	39	24	0	27	8	6	14	3	☿	7 54 47	☿	7 52 46	-2	1
	7	14	28	16	0	28	57	7	11	47	☿	8 3 17	☿	8 1 34	-1	43
	8	15	23	22	0	29	51	7	25	7	☿	22 23 32	☿	22 21 13	-2	19
	9	16	18	32	1	0	45	8	8	2	☿	7 11 34	☿	6 8 22	-3	12
	10	17	12	52	1	1	39	8	20	35	☿	19 30 27	☿	19 26 22	-4	5
	11	18	5	20	1	2	33	9	2	45	☿	2 23 32	☿	2 19 53	-3	39
	12	18	55	18	1	3	27	9	14	35	☿	14 57 35	☿	14 54 18	-3	17
	14	20	27	8	1	5	15	10	7	28	☿	9 30 1	☿	9 28 33	-1	28
	17	22	31	51	1	7	57	11	10	50	☿	16 6 50	☿	16 7 26	+0	36
	26	4	58	34	1	15	11	2	16	36	☿	0 40 30	☿	0 44 57	+4	27
	29	7	45	58	1	17	55	3	27	49	☿	14 10 28	☿	14 10 24	-0	4
Sept.	30	8	38	57	1	18	50	4	11	57	☿	29 16 33	☿	29 14 58	-1	35
Octo.	1	9	31	0	1	19	45	4	26	8	☿	14 34 32	☿	14 32 42	-1	50
	2	10	23	4	1	20	39	5	10	17	☿	29 59 13	☿	29 56 38	-2	35
	3	11	15	50	1	21	34	5	24	17	☿	15 20 9	☿	15 17 23	-2	46
	5	13	7	48	1	23	24	6	21	35	☿	15 16 47	☿	15 14 53	-1	54
	6	14	4	20	1	24	19	7	4	46	☿	29 39 3	☿	29 35 49	-3	14
	8	15	55	19	1	26	9	8	0	4	☿	26 54 50	☿	26 50 40	-4	10
	9	16	47	27	1	27	4	8	12	13	☿	9 52 38	☿	9 48 16	-4	22
	10	17	36	32	1	27	59	8	24	9	☿	22 30 11	☿	22 25 39	-4	32
	11	18	22	34	1	28	53	9	5	41	☿	4 52 20	☿	4 47 57	-4	23
	14	20	28	40	2	1	37	10	9	41	☿	11 29 10	☿	11 27 12	-1	58
	15	21	9	33	2	2	32	10	20	58	☿	23 49 26	☿	23 48 14	-1	12

GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXI. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.		
M.	D.	H.	'	"	S.	o	'	S.	o	'	o	'	"	o	'	"	o	'	"	'	"
Octo.	22	1	57	2	2	8	2	1	2	18	12	32	17	12	34	30	+2	13			
	23	2	54	8	2	8	58	1	15	12	26	28	44	26	31	54	+3	10			
	24	3	51	18	2	9	53	1	28	25	10	36	59	10	40	12	+3	13			
	26	5	44	42	2	11	45	2	25	38	9	24	3	9	27	48	+3	45			
	27	6	32	53	2	12	40	3	9	27	24	0	12	24	2	1	+1	49			
Cent.	28	7	24	33	2	13	35	3	23	23	8	46	1	8	47	30	+1	29			
	29	8	13	37	2	14	30	4	7	17	23	38	51	23	38	20	—0	31			
	30	9	4	17	2	15	26	4	21	6	8	33	31	8	32	49	—0	42			
Octo.	31	9	56	23	2	16	21	5	4	45	23	25	45	23	24	52	—0	53			
Nov.	1	10	50	23	2	17	16	5	18	11	8	9	29	8	8	27	—1	2			
Cent.	2	11	47	20	2	18	12	6	1	21	22	38	50	22	37	53	—0	57			
	4	13	41	32	2	20	4	6	26	47	20	35	30	20	33	8	—2	22			
	5	14	35	52	2	21	0	7	9	2	3	58	4	3	54	44	—3	20			
	7	16	15	16	2	22	51	8	2	46	29	37	24	29	32	56	—4	28			
	11	19	4	31	2	26	32	9	18	31	18	41	57	18	39	39	—2	18			
	23	4	30	6	3	6	46	2	7	14	19	37	57	19	40	10	+2	13			
	25	6	10	24	3	8	38	3	4	57	19	0	19	19	1	7	+0	48			
Nov.	29	9	35	12	3	12	22	4	28	42	16	43	0	16	42	29	—0	31			
Cent.	2	12	22	41	3	15	10	6	6	14	27	59	55	27	58	27	—1	28			
Dec.	4	14	6	35	3	17	2	6	29	53	24	4	51	24	2	11	—2	40			
	5	14	53	17	3	17	58	7	11	24	6	42	25	6	39	21	—3	4			
	6	15	37	10	3	18	54	7	22	47	19	6	53	19	3	59	—2	54			
	7	16	19	1	3	19	50	8	4	5	1	22	58	1	20	2	—2	56			
	8	16	59	40	3	20	45	8	15	23	13	35	1	13	32	17	—2	44			
	9	17	40	9	3	21	41	8	26	45	25	48	10	25	46	3	—2	7			
	13	20	40	33	3	25	24	10	14	3	16	44	47	16	43	14	—1	33			
	21	3	16	6	4	1	58	1	18	13	29	17	30	29	18	43	+1	13			
	24	5	47	23	4	4	46	2	29	58	13	47	38	13	47	9	—0	29			
	25	6	38	13	4	5	42	3	13	29	28	7	39	28	6	44	—0	55			
	26	7	30	30	4	6	38	3	26	42	12	12	21	12	10	56	—1	25			
	27	8	24	16	4	7	34	4	9	35	26	1	58	26	0	22	—1	36			
	29	10	13	21	4	9	27	5	4	22	22	57	7	22	55	59	—1	8			
Cent.	31	11	58	13	4	11	19	5	27	55	18	57	43	18	56	35	—1	8			

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Transitus Limbi Lunæ T. æq.				Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.
M.	D.	H.	' "	S.	' "	' "	' "	' "
Jan.	4	14	56 0	4 15 2	7 12 51	☾ 8 45 18	☾ 8 43 32	—1 46
	5	15	36 21	4 15 58	7 23 59	☾ 20 55 50	☾ 20 55 28	—0 22
	8	17	42 45	4 18 44	8 28 16	☾ 27 56 38	☾ 27 56 15	—0 23
	9	18	29 40	4 19 40	9 10 13	☾ 10 42 13	☾ 10 41 37	—0 36
	10	19	20 13	4 20 36	9 22 30	☾ 23 49 42	☾ 23 48 42	—1 0
	11	20	14 31	4 21 32	10 5 11	☾ 7 23 16	☾ 7 22 26	—0 50
	12	21	12 6	4 22 28	10 18 16	☾ 21 27 25	☾ 21 26 30	—0 55
	20	3	41 48	4 29 0	1 26 49	☾ 8 32 1	☾ 8 33 21	+1 20
Cent.	21	4	34 58	4 29 56	2 10 45	☾ 23 22 6	☾ 23 24 28	+2 22
	22	5	26 49	5 0 52	2 24 21	☾ 7 50 28	☾ 7 49 10	—1 18
	24	7	15 4	5 2 44	3 20 27	☾ 5 31 43	☾ 5 28 26	—3 17
	27	9	52 59	5 5 31	4 26 47	☾ 14 40 15	☾ 14 38 29	—1 46
	28	10	41 15	5 6 27	5 8 15	☾ 27 17 0	☾ 27 15 36	—1 24
Jan.	31	12	54 5	5 9 13	6 11 33	☾ 4 24 36	☾ 4 21 16	—3 20
Feb.	2	14	15 17	5 11 3	7 3 28	☾ 28 49 49	☾ 28 46 10	—3 39
	3	14	56 25	5 11 58	7 14 35	☾ 11 2 47	☾ 11 0 15	—2 32
	6	17	11 57	5 14 44	8 19 17	☾ 18 30 41	☾ 18 30 0	—0 41
	7	18	3 10	5 15 39	9 1 32	☾ 1 31 38	☾ 1 30 44	—0 54
	8	18	57 26	5 16 35	9 14 12	☾ 14 55 48	☾ 14 55 17	—0 31
	17	2	22 36	5 23 58	1 6 47	☾ 16 43 0	☾ 16 44 54	+1 54
	19	4	12 57	5 25 49	2 4 40	☾ 16 38 33	☾ 16 37 48	—0 45
	21	6	4 22	5 27 39	3 0 59	☾ 14 32 10	☾ 14 29 3	—3 7
	22	6	58 21	5 28 35	3 13 31	☾ 27 48 15	☾ 27 44 44	—3 31
	24	8	38 58	6 0 24	4 7 24	☾ 23 21 38	☾ 23 18 39	—2 59
	25	9	25 10	6 1 19	4 18 51	☾ 5 48 24	☾ 5 45 52	—2 32
	26	10	10 5	6 2 14	5 0 5	☾ 18 8 50	☾ 18 5 40	—3 10
Feb.	28	11	31 54	6 4 3	5 22 3	☾ 12 34 33	☾ 12 31 30	—3 3
Cent.	29	12	13 30	6 4 57	6 2 57	☾ 24 47 30	☾ 24 44 8	—3 22
Mart.	2	13	37 52	6 6 46	6 24 59	☾ 19 21 10	☾ 19 17 12	—3 58
	3	14	22 7	6 7 41	7 6 14	☾ 1 46 28	☾ 1 41 49	—4 39
	6	16	50 15	6 10 25	8 11 46	☾ 10 5 13	☾ 10 2 4	—3 9
	9	19	35 52	6 13 9	9 20 50	☾ 21 22 18	☾ 21 18 22	—3 56
	10	20	31 11	6 14 4	10 4 40	☾ 6 3 41	☾ 5 59 3	—4 38
	11	21	25 42	6 14 58	10 18 48	☾ 21 12 55	☾ 21 8 20	—4 35

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☼	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.							
M.	H.	D.	'	"	s.	o.	'	o.	'	"	o.	'	"	'	"	
Mart. 20					6	22	15	2	11	7	II 22	42	10	II 22	40 35	—1 35
22					6	24	3	3	5	57	☾ 19	1	48	☾ 18	58 56	—2 52
23					6	24	57	3	17	48	☾ 1	38	39	☾ 1	36 37	—2 2
24					6	25	51	3	29	21	☾ 14	3	33	☾ 14	1 20	—2 13
25					6	26	45	4	10	40	☾ 26	19	10	☾ 26	17 23	—1 47
26					6	27	39	4	21	49	☾ 8	31	3	☾ 8	29 24	—1 39
27					6	28	32	5	2	52	☾ 20	42	32	☾ 20	41 1	—1 31
Mart. 28					6	29	26	5	13	52	☾ 2	56	37	☾ 2	55 7	—1 30
Cent.::29					7	0	20	5	24	57	☾ 15	16	28	☾ 15	14 44	—1 44
Apri.::2					7	3	55	7	10	59	☾ 6	3	32	☾ 5	58 52	—4 40
:: 15					7	14	41	0	24	43	II 1	42	46	II 1	42 26	—0 20
Cent.::17					7	16	28	1	21	7	☾ 0	9	16	☾ 0	9 11	—0 5
19					7	18	15	2	16	0	☾ 26	40	39	☾ 26	39 46	—0 53
23					7	21	47	4	2	20	☾ 16	18	21	☾ 16	18 15	—0 6
25					7	23	33	4	24	47	☾ 10	49	1	☾ 10	49 2	+0 1
27					7	25	19	5	17	29	☾ 5	51	30	☾ 5	50 9	—1 21
Apri. 29					7	27	6	6	10	56	☾ 1	43	54	☾ 1	40 28	—3 26
Maii. 7					8	4	11	9	26	19	☾ 24	28	2	☾ 24	20 3	—7 59
8					8	5	4	10	10	24	☾ 9	29	35	☾ 9	21 35	—8 0
:: 9					8	5	57	10	24	27	☾ 24	33	55	☾ 24	27 59	—5 56
14					8	9	30	0	18	42	II 23	28	48	II 23	26 48	—2 0
16					8	11	16	1	13	58	☾ 20	51	6	☾ 20	50 8	—0 58
17					8	12	9	1	26	7	☾ 3	56	16	☾ 3	55 28	—0 48
19					8	13	54	2	19	41	☾ 29	10	15	☾ 29	10 26	+0 11
20					8	14	46	3	1	11	☾ 11	29	37	☾ 11	29 43	+0 6
25					8	19	9	4	28	38	☾ 13	32	46	☾ 13	32 54	+0 8
27					8	20	54	5	22	42	☾ 9	53	10	☾ 9	51 54	—1 16
Maii. 31					8	24	26	7	14	17	☾ 6	0	39	☾ 5	57 10	—3 29
Junii. 1					8	25	19	7	27	51	☾ 20	32	8	☾ 20	28 31	—3 37
2					8	26	11	8	11	37	☾ 5	9	42	☾ 5	6 4	—3 38
3					8	27	4	8	25	31	☾ 19	51	50	☾ 19	47 35	—4 15
:: 6					8	29	42	10	7	11	☾ 4	1	11	☾ 3	55 54	—5 17
15					9	6	44	1	18	23	☾ 23	54	32	☾ 23	54 38	+0 6
19					9	10	13	3	4	14	☾ 13	14	1	☾ 13	14 11	+0 10

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Luna Observata.			Longitudo Centri Luna Comput.			Error Comp					
M.	D.	H.	'	"	S.	O.	'	"	S.	O.	'	"	°	'	"	°	'	"	'	"		
Junii.	21	7	32	44	9	11	58		3	27	28		♈	8	3	36	♈	8	5	8	+1	32
	22	8	21	22	9	12	50		4	9	26		♈	20	50	35	♈	20	52	6	+1	31
	23	9	13	15	9	13	43		4	21	32		♈	3	58	20	♈	3	59	18	+0	58
	24	10	7	57	9	14	36		5	4	0		♈	17	29	31	♈	17	29	41	+0	10
	25	11	4	22	9	15	29		5	16	47		♈	1	24	13	♈	1	24	10	—0	3
Junii.	29	14	46	18	9	19	0		7	10	49		♈	0	11	19	♈	0	9	33	—1	46
Julii.	2	17	19	38	9	21	38		8	22	51		♈	14	57	41	♈	14	54	1	—3	40
	6	20	58	32	9	25	9		10	16	58		♈	12	18	24	♈	12	13	55	—4	29
	14	2	37	31	10	1	18		1	10	37		♈	13	50	26	♈	13	50	31	+0	5
::	15	3	18	32	10	2	10		1	21	53		♈	26	7	28	♈	26	8	20	+0	52
::	17	4	41	54	10	3	55		2	14	32		♈	20	32	35	♈	20	35	3	+2	28
	20	7	1	59	10	6	33		3	19	47		♈	28	4	48	♈	28	6	53	+2	5
	23	9	46	0	10	9	12		4	27	44		♈	8	49	1	♈	8	47	36	—1	25
	24	10	42	43	10	10	5		5	11	9		♈	23	20	20	♈	23	19	23	—0	57
	25	11	38	39	10	10	58		5	24	52		♈	8	17	45	♈	8	14	44	—3	1
	28	14	21	35	10	13	38		7	7	18		♈	24	27	48	♈	24	26	26	—1	22
	30	16	7	46	10	15	24		8	5	44		♈	24	52	16	♈	24	50	1	—2	15
Julii.	31	17	2	20	10	16	17		8	19	42		♈	9	37	46	♈	9	34	50	—2	56
Aug.	1	17	58	4	10	17	10		9	3	24		♈	24	2	38	♈	23	58	55	—3	43
	2	18	54	18	10	18	4		9	16	45		♈	8	6	56	♈	8	2	53	—4	3
	3	19	50	5	10	18	57		9	29	44		♈	21	52	10	♈	21	48	14	—3	56
	5	21	35	57	10	20	43		10	24	34		♈	18	31	36	♈	18	30	4	—1	32
	18	6	37	1	11	1	20		3	12	27		♈	18	41	24	♈	18	43	2	+1	38
	19	7	31	27	11	2	14		3	25	9		♈	2	10	33	♈	2	10	22	—0	11
	20	8	26	46	11	3	8		4	8	15		♈	16	9	7	♈	16	7	23	—1	44
	22	10	17	11	11	4	55		5	5	37		♈	15	41	46	♈	15	37	49	—3	57
	25	13	2	6	11	7	36		6	18	41		♈	2	43	17	♈	2	39	59	—3	18
	26	13	57	7	11	8	30		7	3	11		♈	18	25	45	♈	18	22	57	—2	48
	27	14	53	17	11	9	24		7	17	32		♈	3	50	55	♈	3	48	37	—2	18
	28	15	50	34	11	10	18		8	1	40		♈	18	52	41	♈	18	49	55	—2	46
Aug.	29	16	48	15	11	11	12		8	15	27		♈	3	27	0	♈	3	23	37	—3	23
Sept.	1	19	33	4	11	13	53		9	24	22		♈	14	32	17	♈	14	29	25	—2	52
	2	20	22	35	11	14	47		10	6	30		♈	27	31	54	♈	27	30	13	—1	41
	4	21	53	21	11	16	34		10	29	45		♈	22	50	7	♈	22	51	23	+1	16

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☼	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.									
M.	H.	D.	'	"	S.	O.	'	°	'	"	°	'	"	'	"			
Sept.	15	5	22	4	II	25	33	2	22	57	♄ 26	47	14	♄ 26	50	53	+3	39
	16	6	15	17	II	26	27	3	5	34	♄ 10	9	0	♄ 10	10	47	+1	47
	18	8	2	10	II	28	16	4	2	3	♄ 8	18	16	♄ 8	16	24	-1	52
	19	8	55	22	II	29	10	4	15	53	♄ 23	10	24	♄ 23	6	15	-4	9
	21	10	42	25	0	0	59	5	14	28	♄ 14	14	18	♄ 14	8	10	-6	8
	22	11	37	28	0	1	54	5	29	2	♄ 10	8	41	♄ 10	3	5	-5	36
	24	13	32	58	0	3	43	6	28	4	♄ 11	43	38	♄ 11	39	43	-3	55
	25	14	35	6	0	4	38	7	12	19	♄ 27	4	0	♄ 26	59	46	-4	14
	28	17	27	31	0	7	22	8	22	42	♄ 9	56	45	♄ 9	52	27	-4	18
	29	18	18	57	0	8	17	9	5	16	♄ 23	16	11	♄ 23	12	10	-4	1
Sept.	30	19	6	57	0	9	12	9	17	26	♄ 6	13	9	♄ 6	9	54	-3	15
	Octo.	1	19	51	56	0	10	6	9	29	14	♄ 18	51	41	♄ 18	50	31	-1
3		21	16	15	0	11	55	10	21	58	♄ 13	36	35	♄ 13	38	10	+1	35
	14	5	1	59	0	21	2	2	16	19	♄ 18	57	45	♄ 19	0	46	+3	1
	15	5	43	40	0	21	57	2	29	14	♄ 2	41	1	♄ 2	42	25	+1	24
	17	7	35	52	0	23	47	3	26	14	♄ 1	24	5	♄ 1	21	38	-2	27
	18	8	27	22	0	24	42	4	10	15	♄ 16	25	8	♄ 16	21	17	-3	51
	19	9	20	13	0	25	38	4	24	30	♄ 1	49	43	♄ 1	44	18	-5	25
	20	10	15	7	0	26	33	5	8	55	♄ 17	29	18	♄ 17	23	47	-5	31
	21	11	12	35	0	27	28	5	23	23	♄ 3	14	46	♄ 3	9	45	-5	1
	24	14	16	51	1	0	15	7	5	46	♄ 19	19	10	♄ 19	15	28	-3	42
	25	15	15	13	1	1	11	7	19	13	♄ 3	47	45	♄ 3	44	6	-3	39
	29	18	32	2	1	4	52	9	8	57	♄ 26	55	10	♄ 26	52	26	-2	44
Octo.	30	19	14	17	1	5	47	9	20	32	♄ 9	21	55	♄ 9	19	36	-2	19
	Nov.	10	2	58	55	1	15	2	1	14	47	♄ 14	54	17	♄ 14	54	55	+0
13		5	30	32	1	17	49	2	23	28	♄ 26	18	6	♄ 26	19	16	+1	10
15		7	10	10	1	19	40	3	20	51	♄ 25	23	36	♄ 25	25	26	+1	50
19		10	53	4	1	23	24	5	17	18	♄ 26	13	28	♄ 26	11	15	-2	13
Cent.	20	11	55	21	1	24	20	6	1	13	♄ 11	25	10	♄ 11	22	55	-2	15
	22	13	54	50	1	26	13	6	28	7	♄ 10	48	15	♄ 10	45	10	-3	5
	23	14	48	56	1	27	9	7	11	0	♄ 24	50	14	♄ 24	49	46	-0	28
	24	15	39	3	1	28	5	7	23	32	♄ 8	24	40	♄ 8	22	54	-1	46
	25	16	25	37	1	29	0	8	5	43	♄ 21	33	19	♄ 21	31	5	-2	14
	27	17	51	36	2	0	52	8	29	15	♄ 16	49	46	♄ 16	48	2	-1	44

**LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
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Anno JULIANO MDCCXXXII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.									
M.	D.	H.	'	"	S.	o	'	o	'	"	o	'	"	'	"			
Nov.	28	18	33	1	2	1	47	9	10	42	☾29	8	14	☾29	6	30	—1	44
	29	19	14	37	2	2	43	9	22	2	☾11	20	16	☾11	19	15	—1	1
Nov.	30	19	57	18	2	3	39	10	3	19	☾23	31	58	☾23	31	28	—0	30
Dec.	9	2	38	5	2	11	6	1	8	21	☾7	56	30	☾7	55	31	—0	59
	10	3	28	27	2	12	2	1	21	23	☾22	3	30	☾22	3	23	—0	7
	11	4	17	56	2	12	58	2	4	42	☾6	21	34	☾6	21	23	—0	11
	13	5	57	15	2	14	50	3	2	1	☾5	24	9	☾5	22	31	—1	38
	17	9	38	18	2	18	35	4	27	27	☾4	31	1	☾4	27	50	—3	11
	22	14	16	9	2	23	17	7	2	5	☾15	24	29	☾15	23	45	—0	44
	29	19	20	53	2	29	47	9	23	7	☾12	57	30	☾12	56	44	—0	46

Anno JULIANO MDCCXXXIII. Currente.

Jan.	8	3	4	13	3	8	11	1	15	51	☾16 10 17	☾16 10 4	—0 13
	9	3	54	48	3	9	7	1	29	36	☾0 57 6	☾0 56 52	—0 14
	10	4	46	13	3	10	3	2	13	28	☾15 42 31	☾15 41 40	—0 51
	11	5	39	9	3	10	59	2	27	22	☾0 23 23	☾0 22 6	—1 17
	12	6	34	2	3	11	55	3	11	12	☾14 59 0	☾14 57 0	—2 0
	14	8	28	24	3	13	47	4	8	23	☾13 49 34	☾13 47 8	—2 26
	15	9	25	50	3	14	43	4	21	37	☾28 2 16	☾28 0 27	—1 49
	16	10	23	55	3	15	39	5	4	32	☾12 4 38	☾12 4 23	—0 15
Jan.	17	11	14	46	3	16	35	5	17	5	☾25 52 42	☾25 52 41	—0 1
Feb.	5	1	48	20	4	3	15	0	26	33	☾25 5 30	☾25 5 41	+0 11
	9	5	26	32	4	6	57	2	22	45	☾25 8 47	☾25 7 0	—1 47
	10	6	24	0	4	7	53	3	6	27	☾9 33 42	☾9 31 13	—2 29
	11	7	20	58	4	8	48	3	19	50	☾23 40 47	☾23 39 23	—1 24
	12	8	16	31	4	9	44	4	2	53	☾7 35 18	☾7 32 32	—2 46
	13	9	9	30	4	10	39	4	15	33	☾21 13 7	☾21 11 34	—1 33
	14	9	59	40	4	11	34	4	27	52	☾4 37 46	☾4 36 56	—0 50
Feb.::	28	20	57	10	4	24	22	10	11	33	☾2 43 8	☾2 41 24	—1 44
Mart.	10	5	15	26	5	2	36	2	17	52	☾19 10 33	☾19 9 33	—1 0
	14	8	45	3	5	6	14	4	9	9	☾13 44 21	☾13 43 14	—1 7

LUNÆ MERIDIANÆ LONGITUDINES
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Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.				
M.	D.	H.	'	"	s.	o.	'	o.	'	"	'	"	
Mart. 15 9 30 22					5	7	8	4	21	0	♌ 26 39 4	♌ 26 38 31	—0 33
17 10 56 18					5	8	56	5	13	52	♍ 21 53 30	♍ 21 53 4	—0 26
Mart. 27 18 46 30					5	17	57	9	8	25	♍ 26 39 6	♍ 26 33 42	—5 24
Apri. 6 3 2 34					5	26	3	1	14	54	♎ 12 57 18	♎ 12 58 51	+1 33
7 4 2 35					5	26	57	1	28	53	♎ 27 50 2	♎ 27 51 25	+1 23
11 7 28 48					6	0	32	3	20	27	♏ 22 37 48	♏ 22 37 59	+0 11
12 8 12 50					6	1	25	4	2	29	♏ 5 24 15	♏ 5 24 46	+0 31
13 8 55 25					6	2	19	4	13	52	♏ 17 56 48	♏ 17 57 45	+0 57
15 10 19 30					6	4	5	5	6	18	♏ 12 34 56	♏ 12 35 40	+0 44
Cent. 17 11 47 54					6	5	52	5	28	17	♏ 6 58 50	♏ 6 56 42	—2 8
22 15 51 20					6	10	18	7	24	54	♏ 9 0 36	♏ 8 54 45	—5 51
23 16 41 12					6	11	12	8	6	59	♏ 21 58 34	♏ 21 52 19	—6 15
25 18 19 41					6	12	58	9	2	18	♏ 18 55 5	♏ 18 48 10	—6 55
26 19 8 56					6	13	51	9	15	34	♏ 3 0 57	♏ 2 53 5	—7 52
Apri. 27 19 58 54					6	14	44	9	29	15	♏ 17 32 3	♏ 17 26 41	—5 22
Maii. 5 2 45 35					6	20	58	1	9	36	♏ 5 36 20	♏ 5 38 45	+2 25
6 3 42 30					6	21	52	1	23	12	♏ 20 11 33	♏ 20 13 28	+1 55
13 9 0 33					6	28	1	4	17	39	♏ 20 43 47	♏ 20 45 36	+1 49
15 10 29 44					6	29	47	5	9	52	♏ 15 5 22	♏ 15 5 20	—0 2
Cent. 16 11 18 0					7	0	39	5	20	59	♏ 27 21 38	♏ 27 20 33	—1 5
20 14 38 32					7	4	11	7	6	58	♏ 17 57 2	♏ 17 51 32	—5 30
21 15 28 0					7	5	3	7	19	6	♏ 1 7 0	♏ 1 0 27	—6 33
22 16 16 42					7	5	56	8	1	35	♏ 14 32 20	♏ 14 25 36	—6 44
23 17 4 58					7	6	49	8	14	26	♏ 28 15 38	♏ 28 8 15	—7 23
Maii. 27 20 27 53					7	10	20	10	9	20	♏ 26 26 2	♏ 26 17 42	—8 20
Junii. 3 2 22 38					7	15	38	1	3	54	♏ 27 36 50	♏ 27 38 44	+1 54
4 3 14 36					7	16	31	1	16	59	♏ 11 44 37	♏ 11 47 51	+3 14
6 4 48 33					7	18	16	2	12	1	♏ 8 38 3	♏ 8 40 30	+2 27
9 6 57 26					7	20	53	3	17	18	♏ 16 18 6	♏ 16 20 31	+2 25
13 10 0 30					7	24	23	5	2	33	♏ 5 16 47	♏ 5 16 46	—0 1
14 10 50 21					7	25	15	5	13	59	♏ 17 49 30	♏ 17 48 5	—1 25
Cent. 15 11 42 16					7	26	8	5	25	34	♏ 0 35 32	♏ 0 33 5	—2 27
20 15 21 29					8	0	31	7	27	18	♏ 8 1 34	♏ 7 56 22	—5 12

**LUNÆ MERIDIANÆ LONGITUDINES
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Anno JULIANO MDCCXXXIII. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.		
M.	D.	H.	'	"	S.	o	'	S.	o	'	o	'	"	o	'	"	'	"	
Junii.	21	16	40	1	8	1	23	8	10	35	♄	22	11	1	♄	22	6	3	-4 58
	22	17	29	41	8	2	16	8	24	10	Υ	6	34	3	Υ	6	27	57	-6 6
	23	18	21	19	8	3	9	9	8	1	Υ	21	9	7	Υ	21	2	0	-7 7
	24	19	15	32	8	4	1	9	22	3	♅	5	54	36	♅	5	47	43	-6 53
Junii.	27	22	12	48	8	6	40	11	4	20	♁	20	54	12	♁	20	51	8	-3 4
Julii.	6	4	52	42	8	13	41	2	16	6	♁	11	20	48	♁	11	23	40	+2 52
	7	5	36	8	8	14	34	2	27	40	♁	22	41	53	♁	23	43	44	+1 51
	10	7	53	33	8	17	11	4	2	2	♄	0	21	57	♄	0	23	28	+1 31
	11	8	42	40	8	18	4	4	13	34	♄	12	47	59	♄	12	48	54	+0 55
	12	9	33	7	8	18	57	4	25	15	♄	25	28	10	♄	25	28	21	+0 11
	13	10	24	22	8	19	50	5	7	6	♄	8	26	39	♄	8	25	5	-1 34
	14	11	15	38	8	20	42	5	19	11	♄	21	43	31	♄	21	40	53	-2 38
	18	14	37	35	8	24	13	7	10	16	♄	17	43	8	♄	17	39	36	-3 32
	20	16	18	38	8	25	59	8	7	27	Υ	16	46	40	Υ	16	43	12	-3 28
	21	17	11	44	8	26	52	8	21	21	♅	1	25	11	♅	1	21	21	-3 50
	22	18	7	4	8	27	45	9	5	20	♅	16	5	35	♅	16	1	5	-4 30
	23	19	4	31	8	28	38	9	19	19	♁	0	46	55	♁	0	42	0	-4 45
	24	20	3	14	8	29	31	10	3	13	♁	15	26	47	♁	15	22	30	-4 17
Julii.	25	21	1	53	9	0	25	10	16	55	♅	0	3	10	♅	0	0	12	-2 58
Aug.	1	2	3	13	9	5	43	1	3	0	♁	23	17	45	♁	23	18	20	+0 35
	6	5	47	28	9	10	7	3	0	42	♁	25	19	55	♁	25	21	28	+1 33
	7	6	34	23	9	11	0	3	12	14	♄	7	35	47	♄	7	36	52	+1 5
	9	8	14	14	9	12	47	4	5	45	♄	2	46	42	♄	2	45	53	-0 49
	11	9	56	13	9	14	33	5	0	11	♄	29	18	19	♄	29	15	23	-2 56
	12	10	47	3	9	15	26	5	12	49	♄	13	10	36	♄	13	6	23	-4 13
	13	11	38	42	9	16	19	5	25	47	♄	27	25	35	♄	27	21	20	-4 15
	16	14	13	36	9	19	0	7	6	23	Υ	11	44	16	Υ	11	41	21	-2 55
	18	16	2	53	9	20	47	8	4	25	♅	11	36	13	♅	11	34	18	-1 55
	19	17	0	10	9	21	40	8	18	29	♅	26	24	25	♅	26	22	8	-2 17
	23	20	47	30	9	25	15	10	12	53	♅	23	56	15	♅	23	55	17	-0 58
Aug.	25	22	28	0	9	27	2	11	8	12	♅	21	27	54	♅	21	30	5	+2 11
Sept.	1	2	54	24	10	2	23	1	17	57	♁	8	17	46	♁	8	19	27	+1 41
	6	6	55	40	10	6	52	3	15	38	♄	10	0	13	♄	10	0	12	-0 1
	7	7	44	36	10	7	46	3	27	48	♄	23	3	7	♄	23	1	22	-1 45

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp		
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	°	'	"	°	'	"	'	"	
Sept. 8 8 34 44					10	8	40	4	10	18	☾	6	31	58	☾	6	28	21	—3 37
9 9 24 57					10	9	34	4	23	8	☾	20	28	42	☾	20	23	50	—4 52
10 10 15 28					10	10	28	5	6	21	☾	4	53	9	☾	5	48	14	—4 55
14 13 53 12					10	14	5	7	2	10	☾	5	43	0	☾	5	40	31	—2 29
17 16 51 5					10	16	48	8	14	49	☾	21	1	48	☾	21	0	30	—1 18
18 17 48 55					10	17	43	8	28	36	☾	5	33	20	☾	5	31	34	—1 46
19 18 44 5					10	18	37	9	12	1	☾	19	44	54	☾	19	43	1	—1 53
21 20 25 14					10	20	26	10	7	42	☾	17	11	13	☾	17	12	32	+1 19
Sept. 29 1 35 55					10	26	46	0	28	16	☾	16	1	58	☾	16	1	0	—0 58
Octo. 1 3 10 10					10	28	38	1	20	31	☾	10	20	54	☾	10	20	46	—0 8
4 5 35 54					11	1	19	2	25	15	☾	17	34	42	☾	17	34	45	+0 3
5 6 24 34					11	2	13	3	7	22	☾	0	31	18	☾	0	30	52	—0 26
7 8 2 13					11	4	3	4	2	45	☾	27	43	25	☾	27	39	35	—3 50
8 8 52 0					11	4	58	4	16	2	☾	12	3	34	☾	11	58	5	—4 46
9 9 43 23					11	5	53	4	29	44	☾	26	54	55	☾	26	49	0	—5 55
10 10 37 1					11	6	48	5	13	46	☾	12	12	5	☾	12	5	55	—6 10
14 14 38 42					11	10	29	7	11	38	☾	14	52	53	☾	14	50	56	—1 57
15 15 39 34					11	11	24	7	25	52	☾	0	4	37	☾	0	3	5	—1 32
16 16 37 38					11	12	20	8	9	46	☾	14	50	24	☾	14	48	57	—1 27
18 18 22 45					11	14	10	9	6	17	☾	12	59	47	☾	12	58	14	—1 33
19 19 10 20					11	15	5	9	18	54	☾	26	27	21	☾	26	26	3	—1 18
22 21 22 37					11	17	50	10	24	27	☾	4	58	51	☾	4	59	15	+0 24
30 2 43 6					11	24	16	1	11	58	☾	0	43	34	☾	0	43	9	—0 25
Octo. 31 3 31 23					11	25	12	1	23	23	☾	13	8	59	☾	13	9	10	+0 11
Nov. 4 6 41 27					11	28	53	3	12	16	☾	5	32	28	☾	5	31	59	+0 29
6 8 20 49					0	0	44	4	9	8	☾	4	16	15	☾	4	12	35	—3 40
7 9 14 18					0	1	40	4	23	9	☾	19	21	16	☾	19	17	13	—4 3
8 10 11 15					0	2	36	5	7	30	☾	4	51	23	☾	4	47	38	—3 45
12 14 22 40					0	6	21	7	5	34	☾	7	55	45	☾	7	54	59	—0 46
17 18 37 40					0	10	59	9	11	9	☾	18	11	40	☾	18	9	13	—2 27
Nov. 20 20 48 3					0	13	46	10	15	56	☾	25	41	50	☾	25	41	22	—0 28
Dec. 1 4 37 31					0	23	4	2	9	35	☾	0	46	22	☾	0	47	33	+1 11
2 5 24 18					0	23	59	2	22	16	☾	14	20	1	☾	14	21	2	+1 1
3 6 12 13					0	24	55	3	5	23	☾	28	14	27	☾	28	15	25	+0 58
4 7 2 14					0	25	51	3	18	53	☾	12	33	45	☾	12	33	41	—0 4

**LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXXIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.		
M.	D.	H.	'	"	S.	O.	'	S.	O.	'	O.	'	"	O.	'	"	'	"	
Dec.	6	8	51	56	0	27	44	4	16	57	♌	12	27	16	♌	12	25	36	—E 40
	7	9	52	7	0	28	40	5	1	21	♌	27	56	45	♌	27	55	17	—I 28
	8	10	54	51	0	29	36	5	15	50	♍	13	39	29	♍	13	38	17	—I 12
	12	14	4	16	1	3	22	7	11	58	♍	14	58	17	♍	14	58	55	+0 38
	14	16	31	56	1	5	14	8	7	49	♎	12	52	57	♎	12	51	17	—I 40
	15	17	17	13	1	6	10	8	20	8	♎	26	4	48	♎	26	2	19	—2 29
	16	18	1	20	1	7	6	9	2	7	♏	8	52	36	♏	8	49	3	—3 33
	17	18	45	13	1	8	1	9	13	47	♏	21	21	52	♏	21	18	10	—3 42
	18	19	29	31	1	8	57	9	25	56	♐	3	37	50	♐	3	34	13	—3 37
Dec.	30	4	10	9	1	19	12	2	2	58	♐	23	53	49	♐	23	53	44	—0 5

Anno JULIANO MDCCXXXIV. Currente.

Jan.	1	5	48	48	1	21	4	2	29	30	♑	22	0	48	♑	22	1	30	+0 42
	2	6	41	56	1	22	0	3	13	15	♑	6	29	22	♑	6	29	56	+0 36
	4	8	37	35	1	23	53	4	11	24	♒	6	20	2	♒	6	19	23	—0 39
	5	9	38	40	1	24	49	4	25	36	♒	21	35	9	♒	21	34	44	—0 25
	6	10	39	53	1	25	45	5	9	44	♓	6	56	7	♓	6	56	20	+0 13
	7	11	39	21	1	26	42	5	23	40	♓	22	12	26	♓	22	13	32	+1 6
	11	15	8	42	2	0	26	7	16	17	♎	20	0	5	♎	19	59	26	—0 39
	13	16	39	30	2	2	17	8	10	34	♏	16	11	29	♏	16	8	29	—3 0
	17	19	42	55	2	6	0	9	26	37	♏	5	24	42	♏	5	20	30	—4 12
	19	21	19	58	2	7	51	10	19	20	♐	0	3	15	♐	0	0	0	—3 15
Jan.	31	6	30	1	2	18	3	8	3	33	♐	1	13	3	♐	1	13	7	+0 4
Feb.	1	7	28	37	2	18	59	3	22	33	♐	15	57	48	♐	15	58	30	+0 42
Cent.	3	9	27	9	2	20	50	4	20	16	♑	15	36	30	♑	15	37	54	+1 24
	4	10	22	24	2	21	46	5	3	51	♑	0	24	0	♑	0	24	24	+0 24
Cent.	5	11	17	16	2	22	42	5	17	10	♒	15	1	17	♒	15	2	17	+1 0
	10	15	16	54	2	27	18	7	19	9	♒	23	12	26	♒	23	10	39	—1 47
	11	16	2	42	2	28	13	8	0	49	♓	5	48	53	♓	5	45	32	—3 21
	15	19	11	46	3	1	53	9	16	43	♓	24	52	23	♓	24	47	57	—4 26
	18	21	37	32	3	4	39	10	21	50	♏	2	54	38	♏	2	50	51	—3 47
Feb.	27	4	25	44	3	11	58	2	6	34	♏	26	49	29	♏	25	50	40	+1 11
Mart.	1	6	22	26	3	13	49	3	4	28	♐	26	15	35	♐	26	15	10	—0 25

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.	Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.					
M.	H.	D.	'	"	S.	O.	'	"	°	'	"	°	'	"	'	"
Mart.																
	2	7	21	12	3	14	44		☾ 10 52 1	☾ 10 50 52	—1 9					
	3	8	15	37	3	15	39		☾ 25 19 9	☾ 25 18 10	—0 59					
	13	16	16	17	3	24	44		☾ 7 36 18	☾ 7 31 12	—5 6					
	15	17	52	14	3	26	32		☾ 2 4 24	☾ 1 59 26	—4 58					
	18	20	15	31	3	29	15	10 1 9	☾ 10 4 36	☾ 10 0 23	—4 13					
Mar. 29																
	5	16	16		4	8	20		☾ 6 23 35	☾ 6 26 19	+2 44					
Apri.																
	1	7	56	28	4	11	0		☾ 19 22 5	☾ 19 21 59	—0 6					
	2	8	44	56	4	11	54		☾ 3 6 42	☾ 3 7 1	+0 19					
	3	9	31	36	4	12	47		☾ 16 34 57	☾ 16 35 25	+0 28					
	4	10	17	19	4	13	41		☾ 29 48 53	☾ 29 48 42	—0 11					
	5	11	2	34	4	14	35		☾ 12 47 49	☾ 12 47 19	—0 30					
	11	15	46	3	4	19	56		☾ 27 20 18	☾ 27 14 21	—5 57					
	12	16	43	43	4	20	50		☾ 9 35 59	☾ 9 30 13	—5 46					
	13	17	20	55	4	21	43		☾ 21 59 5	☾ 21 53 50	—5 15					
	14	18	7	42	4	22	36		☾ 4 35 40	☾ 4 29 59	—5 41					
	15	18	54	14	4	23	30		☾ 17 28 47	☾ 17 23 25	—5 22					
	17	20	28	36	4	25	16	10 6 4	☾ 14 25 46	☾ 14 21 0	—4 46					
	24	2	2	25	5	0	38		☾ 15 1 48	☾ 15 5 33	+3 45					
	28	5	53	19	5	4	11		☾ 14 59 24	☾ 15 1 47	+2 23					
	29	6	42	59	5	5	5		☾ 28 57 32	☾ 28 59 6	+1 34					
Apri. 30																
	7	30	14		5	5	58		☾ 12 32 10	☾ 12 32 50	+0 40					
Maii.																
	3	9	45	37	5	8	37		☾ 21 24 19	☾ 21 24 27	+0 8					
	4	10	30	58	5	9	30		☾ 3 55 58	☾ 3 55 12	—0 46					
Cent.																
	5	11	18	11	5	10	23		☾ 16 20 0	☾ 16 17 56	—2 4					
Cent.																
	6	12	5	12	5	11	16		☾ 28 37 53	☾ 28 34 19	—3 34					
	12	16	49	14	5	16	33		☾ 12 37 8	☾ 12 31 18	—5 50					
	13	17	34	50	5	17	26		☾ 25 28 12	☾ 15 21 59	—6 13					
	24	2	48	24	5	26	16		☾ 24 10 4	☾ 24 14 40	+4 36					
Maii. 26																
	4	37	26		5	28	2		☾ 23 50 36	☾ 23 55 29	+4 53					
Junii.																
	2	10	1	25	6	4	9		☾ 24 39 10	☾ 24 38 44	—0 26					
Cent.																
	4	11	37	38	6	5	55		☾ 19 4 53	☾ 19 2 7	—2 46					
	10	16	17	43	6	11	10		☾ 4 5 3	☾ 4 0 57	—4 6					
	11	17	3	12	6	12	2		☾ 17 15 22	☾ 17 10 20	—5 2					
	12	17	49	51	6	12	55		☾ 0 43 54	☾ 0 39 8	—4 46					

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIV. Currente.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error Comp.		
M.	H.	D.	'	"	S.	O.	'	S.	O.	'	°	'	"	°	'	"	'	"	
Junii. 25					6	23	28	2	15	12	♊	29	44	46	♊	29	46	42	+1 56
30					6	27	50	4	14	21	♋	2	49	1	♋	2	50	6	+1 5
Julii. 1					6	28	43	4	25	32	♋	15	0	52	♋	15	1	8	+0 16
3					7	0	28	5	17	47	♌	9	33	2	♌	9	31	45	-1 17
7					7	3	58	7	3	28	♌	0	7	30	♌	0	3	47	-3 43
9					7	5	43	7	27	49	♌	26	28	17	♌	26	25	16	-3 1
13					7	9	14	9	21	2	♍	22	38	50	♍	22	33	59	-4 51
16					7	11	52	11	3	57	♍	8	24	45	♍	8	21	12	-3 33
27					7	20	43	3	13	52	♎	28	23	21	♎	28	22	40	-0 41
28					7	21	35	3	25	19	♏	10	36	51	♏	10	37	16	+0 25
29					7	22	28	4	6	39	♏	22	50	12	♏	22	50	24	+0 12
30					7	23	21	4	17	57	♏	5	7	9	♏	5	6	46	-0 23
Julii. 31					7	24	14	4	29	15	♏	17	30	50	♏	17	29	58	-0 52
Aug. 1					7	25	7	5	10	37	♐	0	4	25	♐	0	2	50	-1 35
6					7	29	32	7	10	26	♐	5	54	5	♐	5	51	38	-2 27
7					8	0	25	7	23	17	♐	19	41	26	♐	19	39	59	-1 27
13					8	5	46	10	16	3	♐	17	16	55	♐	17	12	32	-4 23
21					8	12	0	1	18	27	♑	27	52	40	♑	27	51	8	-1 32
23					8	13	47	2	12	16	♑	23	22	15	♑	23	21	1	-1 14
24					8	14	40	2	23	54	♑	5	45	25	♑	5	44	28	-0 57
26					8	16	27	3	16	51	♑	0	16	15	♑	0	15	25	-0 50
29					8	19	7	4	21	22	♑	7	40	35	♑	7	39	36	-0 59
30					8	20	1	5	3	7	♑	20	35	29	♑	20	33	14	-2 15
Aug. 31					8	20	54	5	15	5	♒	3	46	33	♒	3	44	13	-2 20
Sept. 9					8	29	0	9	14	36	♒	12	15	30	♒	12	12	55	-2 35
10					8	29	55	9	28	29	♒	27	1	10	♒	26	57	36	-3 34
11					9	0	49	10	12	11	♒	11	41	54	♒	11	38	31	-3 23
22					9	9	50	2	14	51	♓	25	14	10	♓	25	12	47	-1 23
28					9	15	16	4	25	13	♓	11	6	59	♓	11	5	36	-1 23
29					9	16	11	5	7	43	♓	24	47	42	♓	24	45	42	-2 0
Sept. 30					9	17	5	5	20	33	♓	8	51	42	♓	8	48	6	-3 36
Octo. 7					9	23	30	8	26	59	♓	22	36	15	♓	22	34	49	-1 26
8					9	24	25	9	10	44	♓	7	11	54	♓	7	10	0	-1 54

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXV. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.				
M.	D.	H.	'	"	S.	O.	'	"	O.	'	"	O.	'	"	O.	'	"	'	"		
Octo.	10	20	22	29	9	26	15		10	7	27	☿	5	43	6	☿	5	40	18	—2	48
		11	21	10	56	9	27	10	10	20	19	☿	19	36	36	☿	19	34	20	—2	16
		18	1	55	2	10	2	39	1	1	33	♄	7	55	54	♄	7	54	0	—1	54
		22	5	4	23	10	6	19	2	16	45	♄	27	3	36	♄	27	3	52	+0	16
		25	7	20	16	10	9	5	3	22	2	♄	4	54	2	♄	4	54	7	+0	5
	27	8	53	55	10	10	55	4	17	3	♄	1	48	56	♄	1	49	3	+0	7	
Octo.	30	11	33	20	10	13	41		5	27	20	♄	15	38	15	♄	15	36	24	—1	51
Nov.	5	17	29	21	10	19	16		8	22	15	♄	17	11	58	♄	17	8	58	—3	0
		9	20	42	49	10	22	59	10	13	54	♄	12	17	6	♄	12	14	38	—2	28
		10	21	29	17	10	23	54	10	25	55	♄	25	19	23	♄	25	17	44	—1	39
	26	9	14	36	11	7	49		4	22	31	♄	7	32	54	♄	7	32	49	—0	5
	27	10	12	1	11	8	45		5	6	28	♄	22	39	15	♄	22	38	32	—0	43
Nov.	28	11	12	56	11	9	42		5	20	45	♄	8	13	15	♄	8	11	57	—1	18
Dec.	7	19	27	55	11	18	7		9	24	26	♄	21	22	0	♄	21	17	0	—5	0
		9	21	1	11	11	19	59	10	18	2	♄	16	48	28	♄	16	44	15	—4	13
		10	21	48	36	11	20	55	10	29	25	♄	29	16	14	♄	29	12	26	—3	48
	19	3	55	40	11	28	22		1	28	21	♄	7	50	25	♄	7	51	22	+0	57
	20	4	39	36	11	29	17		2	10	11	♄	20	31	34	♄	20	35	1	+3	27
	22	6	11	42	0	1	9		3	5	0	♄	16	52	42	♄	16	56	13	+3	31
Dec.	23	7	1	29	0	2	5		3	18	2	♄	0	41	0	♄	0	44	7	+3	7

Anno JULIANO MDCCXXXV. Currente.

Janu.	3	17	24	15	0	12	24	8	21	41	♄ 16 43 33	♄ 16 37 8	—6 25
	9	22	8	57	0	17	59	11	1	40	♄ 2 8 1	♄ 2 4 8	—3 53
	15	1	54	51	0	22	37	0	27	1	♄ 3 54 19	♄ 3 52 8	—2 11
	17	3	23	20	0	24	28	1	20	21	♄ 29 23 16	♄ 29 23 47	+0 31
:	19	4	56	43	0	26	20	2	15	4	♄ 25 49 0	♄ 25 49 56	+0 56
	20	5	46	46	0	27	15	2	28	3	♄ 9 29 10	♄ 9 32 14	+3 4
	21	6	40	13	0	28	11	3	11	26	♄ 23 37 23	♄ 23 39 38	+2 15
	22	7	37	0	0	29	7	3	25	13	♄ 8 14 3	♄ 8 14 31	+0 28
:	25	10	38	20	1	1	55	5	8	8	♄ 24 26 56	♄ 24 27 47	+0 51

**LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.**

Anno JULIANO MDCCXXXV. Currente.

<i>Transitus Limbi Lunæ T. æq.</i>					<i>Argument. Annuum.</i>	<i>Distantia ☾ à ☉</i>	<i>Longitudo Centri Lunæ Observata.</i>	<i>Longitudo Centri Lunæ Comput.</i>	<i>Error. Comp.</i>
M.	D.	H.	'	"	S. O. I	S. O. I	O. I. II	O. I. II	I. II
Feb.	14	2	7	44	1 19 28	1 1 13	Υ 8 24 54	Υ 8 23 17	—1 37
	20	7	25	16	1 24 59	3 20 12	☾ 2 32 11	☾ 2 31 36	—0 35
Feb.	21	8	24	0	1 25 55	4 4 19	☾ 17 35 42	☾ 17 34 25	—1 17
Mar.	4	17	58	22	2 5 59	8 27 47	♄ 23 1 40	♄ 22 55 40	—6 0
	19	5	20	2	2 18 41	2 18 20	♄ 27 59 31	♄ 27 59 33	+0 2
	21	7	14	24	2 20 30	3 16 13	☾ 27 31 20	☾ 27 30 0	—1 20
Mar.	24	9	55	56	2 23 13	4 27 39	♄ 11 55 35	♄ 11 52 48	—2 47
Apri.	7	21	12	0	3 5 46	10 16 26	♄ 14 48 4	♄ 14 45 57	—2 7
	19	6	59	33	3 15 37	3 12 49	♄ 22 33 17	♄ 22 32 18	—0 59
	22	9	30	44	3 18 17	4 22 56	♄ 5 21 50	♄ 5 20 46	—1 4
	23	10	19	56	3 19 10	5 5 43	♄ 19 13 34	♄ 19 11 42	—1 52
Maii.	3	18	20	43	3 28 1	9 2 46	♄ 26 41 58	♄ 26 39 51	—2 7
	19	7	28	31	4 11 17	3 22 37	♄ 1 5 28	♄ 1 4 28	—1 0
Maii.	20	8	16	58	4 12 10	4 5 32	♄ 14 49 35	♄ 14 48 25	—1 10
Junii.	5	20	52	33	4 26 11	10 14 56	♄ 9 53 55	♄ 9 50 52	—3 3
	14	4	35	30	5 3 15	2 8 18	♄ 12 17 14	♄ 12 16 15	—0 59
	15	5	25	56	5 4 7	2 21 59	♄ 26 40 8	♄ 26 41 2	+0 54
	16	6	15	10	5 5 0	3 5 17	♄ 10 39 26	♄ 10 39 50	+0 24
Junii.	23	11	56	0	5 11 7	5 28 38	♄ 10 56 53	♄ 10 55 10	—1 43
Julii.	12	3	18	0	5 26 56	1 20 6	♄ 20 49 42	♄ 20 51 24	+1 42
	15	5	49	0	5 29 34	3 0 11	♄ 3 13 25	♄ 3 13 10	—0 15
	17	7	26	45	6 1 20	3 24 52	♄ 29 23 13	♄ 29 23 55	+0 42
Julii.	18	8	15	32	6 2 12	4 6 40	♄ 12 3 56	♄ 12 5 28	+1 32
Aug.	2	20	11	48	6 15 25	10 4 44	♄ 25 9 43	♄ 25 2 38	—7 5
	3	21	11	44	6 16 18	10 18 57	☾ 10 24 53	☾ 10 17 43	—7 10
Aug.	10	2	49	57	6 21 38	1 14 50	♄ 13 21 54	♄ 13 20 47	—1 7
Sept.	9	3	11	56	7 17 32	1 21 19	♄ 18 54 6	♄ 18 52 36	—1 30
	10	4	3	5	7 18 26	2 3 53	♄ 2 21 40	♄ 2 20 17	—1 23
	12	5	42	57	7 20 14	2 28 2	♄ 28 9 31	♄ 28 8 56	—0 35
	13	6	31	9	7 21 8	3 9 42	♄ 10 38 25	♄ 10 39 0	+0 35
	17	9	32	30	7 24 44	4 25 1	♄ 29 46 5	♄ 29 48 20	+2 15
	18	10	16	12	7 25 38	5 6 19	♄ 12 11 35	♄ 12 13 30	+1 55
	20	11	45	55	7 27 26	5 29 19	Υ 7 35 37	Υ 7 35 51	+0 14

LUNA MERIDIANÆ LONGITUDINES
GREN OVICIO OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ

Anno JULIANO MDCCXXXV.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error. Comp.	
M.	H.	D.	'	"	S.	o	'	SS	o	'	o	'	"	o	'	"	'	"		
Octob.	8	2	42	45	8	12	55	I	13	18	I	9	32	6	I	9	30	6	-2	0
	12	5	58	56	8	16	35	3	0	26	☿	0	18	34	☿	0	19	45	+1	11
	15	8	10	38	8	19	19	4	4	38	☿	7	6	22	☿	7	8	2	+1	40
	16	8	54	15	8	20	14	4	16	9	☿	19	35	18	☿	19	36	35	+1	17
	18	10	24	18	8	22	4	5	9	40	☿	15	18	30	☿	15	18	15	-0	15
	28	19	24	57	9	1	18	9	22	15	☿	8	28	22	☿	8	24	0	-4	22
Octob.	29	20	16	24	9	2	13	10	5	56	☿	23	1	58	☿	22	57	3	-4	55
Nov.	10	5	21	10	9	12	23	2	20	25	☿	19	40	49	☿	19	42	36	+1	47
	11	6	4	40	9	13	19	3	1	49	☿	1	53	50	☿	1	55	4	+1	14
	12	6	47	42	9	14	14	3	13	18	☿	14	9	44	☿	14	11	46	+2	2
	14	8	15	32	9	16	5	4	6	46	☿	9	21	29	☿	9	21	48	+0	19
	17	10	42	40	9	18	52	5	13	59	☿	19	53	45	☿	19	51	53	-1	52
Nov.	28	20	44	5	9	29	8	10	13	37	☿	0	55	50	☿	0	51	21	-4	29
Dec.	11	6	8	19	10	10	19	3	3	17	☿	3	43	31	☿	3	46	30	+2	59
	12	6	52	39	10	11	15	3	15	10	☿	16	22	23	☿	16	25	0	+2	37
	13	7	39	7	10	12	10	3	27	22	☿	29	23	47	☿	29	25	40	+1	53
	14	8	28	30	10	13	6	4	9	55	☿	12	53	21	☿	12	54	4	+0	43
	15	9	21	18	10	14	3	4	22	52	☿	26	55	5	☿	26	54	18	-0	47

Anno JULIANO MDCCXXXVI. Currente.

Jan.	5	2	39	50	11	2	44	1	8	7	☿	4	41	24	☿	4	41	0	-0 24
	11	7	8	2	11	8	18	3	18	33	☿	20	11	52	☿	20	13	54	+2 2
	13	8	57	9	11	10	10	4	14	58	☿	18	34	42	☿	18	33	24	-1 18
	14	9	56	8	11	11	7	4	28	48	☿	3	36	21	☿	3	34	33	-1 48
Feb.	11	8	37	30	0	6	8	4	8	7	☿	11	8	46	☿	11	8	0	-0 46
	12	9	36	40	0	7	3	4	22	16	☿	26	25	49	☿	26	23	35	-2 14
Mart.	5	2	59	27	0	26	17	1	14	12	☿	11	2	23	☿	11	0	23	-2 0
	8	5	31	53	0	29	1	2	21	38	☿	21	10	41	☿	21	9	40	-1 1
	10	7	23	20	1	0	51	3	18	36	☿	19	49	8	☿	19	46	48	-2 20
	11	8	20	18	1	1	45	4	2	37	☿	4	44	20	☿	4	41	11	-3 9
	12	9	17	7	1	2	40	4	16	52	☿	19	58	53	☿	19	56	5	-2 48
	13	10	13	27	1	3	35	5	1	16	☿	5	27	50	☿	5	25	54	-1 56
	15	12	0	0	1	5	24	6	0	0	☿	6	36	34	☿	6	36	12	-0 22

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVI. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error. Comp.		
M.	D.	H.	'	"	S	o	I	S.	o	I	o	'	"	o	'	"	'	"	
Apri.					1	22	30	1	20	35	II	17	0	16	II	16	57	32	—2 44
	5	4	22	30	1	23	24	2	3	33	☾	0	54	50	☾	0	52	38	—2 12
	7	6	13	5	1	25	12	3	0	29	☾	29	31	50	☾	29	28	45	—3 5
	8	7	8	12	1	26	6	3	14	22	☾	14	12	16	☾	14	8	18	—3 58
	10	8	56	41	1	27	53	4	12	35	☾	14	6	57	☾	14	2	50	—4 7
	11	9	50	24	1	28	47	4	26	43	☾	29	15	0	☾	29	11	10	—3 50
	23	19	57	30	2	9	28	9	27	19	☾	11	57	42	☾	11	56	11	—1 31
	24	20	40	10	2	10	21	10	8	40	☾	24	10	42	☾	24	9	45	—0 57
	25	21	23	16	2	11	14	10	20	6	☾	6	32	30	☾	6	31	34	—0 56
Maii.					2	18	20	1	29	38	☾	25	10	52	☾	25	10	15	—0 37
	7	6	52	25	2	20	59	3	11	12	☾	9	2	50	☾	9	1	58	—0 52
	9	8	35	33	2	22	45	4	9	2	☾	8	27	56	☾	8	25	14	—2 42
	10	9	27	50	2	23	38	4	22	45	☾	23	7	33	☾	23	5	35	—1 58
	11	10	20	48	2	24	31	5	6	15	☾	7	42	20	☾	7	40	55	—1 25
Maii.	23	20	1	15	3	5	5	10	0	31	☾	13	49	51	☾	13	48	25	—1 26
Junii.					3	12	7	1	12	36	☾	4	58	27	☾	4	59	10	+0 43
	8	9	7	21	3	18	16	4	18	52	☾	16	52	53	☾	16	52	8	—0 45
	9	10	0	6	3	19	9	5	1	47	☾	0	52	40	☾	0	52	31	—0 9
	22	20	12	16	4	0	31	10	4	56	☾	16	48	13	☾	16	44	20	—3 53
Junii.	24	21	56	40	4	2	17	11	0	19	☾	14	15	54	☾	14	12	0	—3 54
Julii.					4	14	36	5	8	56	☾	6	49	27	☾	6	51	17	+1 50
	21	19	43	27	4	25	7	9	28	2	☾	7	42	27	☾	7	36	53	—5 34
	22	20	37	34	4	26	0	10	11	3	☾	21	40	45	☾	21	34	27	—6 18
	30	3	14	25	5	2	12	1	19	59	☾	8	32	38	☾	8	35	20	+2 42
Julii.	31	4	7	45	5	3	5	2	4	7	☾	23	29	26	☾	23	32	17	+2 51
Aug. ::	1	5	0	25	5	3	58	2	17	54	☾	8	1	30	☾	8	6	0	+4 30
	3	6	45	18	5	5	45	3	14	22	☾	6	2	32	☾	6	5	35	+3 3
	4	7	38	29	5	6	38	3	27	1	☾	19	33	52	☾	19	35	47	+1 55
	8	10	54	7	5	10	10	5	14	5	☾	10	54	57	☾	10	57	58	+3 1
	21	21	13	20	5	21	42	10	18	56	☾	28	38	20	☾	28	30	55	—7 25
Aug.	31	5	32	25	5	29	47	2	25	55	☾	15	2	12	☾	15	4	54	+2 42
Sept.	2	7	15	29	6	1	34	3	20	50	☾	11	36	48	☾	11	40	6	+3 18
	29	5	9	8	6	25	4	2	18	54	☾	6	46	38	☾	6	47	54	+1 16

LUNA MERIDIANÆ LONGITUDINES
GRENOVICIO OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ

Anno JULIANO MDCCXXXVI.

Transitûs Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.			Longitudo Centri Lunæ Comput.			Error. Comp.		
M.	H.	D.	'	''	S.	o	'	S	o	'	o	'	''	o	'	''	'	''	
Octob.	1	6	48	28	6	26	53	3	13	10	☿	2	41	12	☿	2	42	29	+ 1 17
	3	8	19	24	6	28	42	4	6	12	☿	27	25	52	☿	27	28	18	+ 2 26
	4	9	2	40	6	29	36	4	17	24	☿	9	35	28	☿	9	38	20	+ 2 52
	6	10	27	39	7	1	25	5	9	31	☿	3	54	11	☿	3	54	58	+ 0 47
	7	11	12	29	7	2	20	5	20	36	☿	16	10	32	☿	16	10	10	— 0 22
Octob.	19	21	24	0	7	13	20	10	22	49	☿	0	32	57	☿	0	28	32	— 4 25
Nov.	1	7	42	8	7	24	25	3	26	57	☿	17	14	22	☿	17	14	42	+ 0 20
	2	8	24	24	7	25	20	4	8	11	☿	29	21	56	☿	29	22	36	+ 0 40
Nov.	29	6	20	2	8	19	30	3	5	29	☿	24	28	32	☿	24	27	20	— 1 12
Dec.	24	2	46	36	9	11	55	1	9	26	☿	24	34	6	☿	24	33	4	— 1 2
	26	4	14	52	9	13	46	2	2	19	☿	19	22	36	☿	19	21	24	— 1 12

Anno JULIANO MDCCXXXVII. Currente.

Jan.	3	10	27	8	9	21	13	5	6	48	☾ 1	22	40	☾ 1	20	13	- 2 27
	25	4	17	28	10	10	46	2	3	32	☾ 20	58	5	☾ 20	56	0	- 2 5
	27	5	44	57	10	12	37	2	26	27	☾ 15	30	33	☾ 15	30	45	+ 0 12
::	28	6	31	36	10	13	32	3	8	14	☾ 28	7	50	☾ 28	8	25	+ 0 35
	30	8	12	17	10	15	23	4	2	49	☾ 24	30	55	☾ 24	31	8	+ 0 13
Feb.	25	5	13	1	11	8	24	2	17	26	☾ 5	53	7	☾ 5	51	50	- 1 17
	26	6	2	13	11	9	19	2	29	30	☾ 18	46	10	☾ 18	46	13	+ 0 3
	27	6	53	44	11	10	14	3	11	57	☾ 2	3	10	☾ 2	3	18	+ 0 8
Feb.	28	7	47	15	11	11	9	3	24	49	☾ 15	47	46	☾ 15	47	4	- 0 42
Mart.	29	7	24	55	0	6	32	3	18	18	☾ 8	1	9	☾ 8	0	49	- 0 20
	30	8	19	6	0	7	26	4	1	57	☾ 22	29	50	☾ 22	28	42	- 1 8
Apri.	2	11	4	10	0	10	8	5	14	48	☾ 8	24	49	☾ 8	25	33	+ 0 44
	26	6	11	24	1	0	39	2	29	49	☾ 17	1	43	☾ 17	1	8	- 0 35
Apri.	27	7	3	48	1	1	33	3	13	22	☾ 1	16	28	☾ 1	16	30	+ 0 2
Maii.	22	3	16	4	1	22	44	1	16	22	☾ 29	0	18	☾ 29	0	11	- 0 7
	23	4	8	21	1	23	37	1	29	14	☾ 12	45	30	☾ 12	46	50	+ 1 20
	24	5	0	19	1	24	30	2	12	27	☾ 26	46	3	☾ 26	46	25	+ 0 22
Maii	27	7	35	15	1	27	8	3	23	47	☾ 10	12	50	☾ 10	12	15	- 0 35
Junii	22	4	40	56	2	19	5	2	9	15	☾ 21	7	32	☾ 21	9	42	+ 2 10

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.			Distantia ☾ à ☼			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.		
M.	H.	D.	'	"	s.	o.	'	s.	o.	'	o.	'	"	o.	'	"	'	"			
Julii.	10	19	40	8	3	4	52	9	27	3	♄	25	57	0	♄	25	54	18	—	2	42
	12	21	17	35	3	6	37	10	20	47	♅	21	38	14	♅	21	36	50	—	1	24
	13	22	9	42	3	7	30	11	3	0	♆	5	0	44	♆	4	58	25	—	2	19
	24	7	1	16	3	16	20	3	18	8	♇	29	59	42	♇	0	1	22	+	1	40
Julii.	26	8	52	20	3	18	6	4	15	4	♈	28	49	2	♈	28	49	14	+	0	12
Aug.	19	4	2	14	4	8	28	2	3	10	♉	10	38	1	♉	10	42	31	+	4	30
Sept.	19	5	38	32	5	5	24	2	26	29	♊	4	10	9	♊	4	11	6	+	0	57
	20	6	33	6	5	6	19	3	9	39	♋	18	6	3	♋	18	7	14	+	1	11
Sept.	21	7	25	29	5	7	13	3	22	23	♌	1	37	27	♌	1	39	10	+	1	43
Nov.	13	2	9	41	6	24	2	1	2	49	♍	5	55	20	♍	5	52	57	—	2	23
	16	4	55	0	6	26	50	2	12	35	♎	18	37	25	♎	18	33	32	—	3	53
	17	5	43	20	6	27	46	2	24	59	♏	1	47	5	♏	1	43	32	—	3	33
	18	6	28	56	6	28	41	3	7	1	♐	14	32	38	♐	14	30	0	—	2	38
	19	7	12	38	6	29	37	3	18	43	♑	27	2	27	♑	26	59	11	—	3	16
	21	8	37	25	7	1	28	4	11	24	♒	21	31	57	♒	21	29	22	—	2	35
	22	9	20	1	7	2	24	4	22	31	♓	3	42	46	♓	3	40	28	—	2	18

Anno JULIANO MDCCXXXVIII. Currente.

Janu.	14	4	28	25	8	19	59	☿ 11 38 39	☿ 11 37 41	—0 58
Feb.	11	3	5	10	9	15	0	☿ 18 45 47	☿ 18 42 7	—3 40
	17	7	37	52	9	20	30	☿ 2 57 25	☿ 2 59 3	+1 38
	18	8	28	10	9	21	25	☿ 15 50 53	☿ 15 52 24	+1 31
Feb.	20	10	12	7	9	23	15	☿ 12 43 50	☿ 12 44 22	+0 32
Mar.	12	2	26	40	10	10	37	☿ 8 32 41	☿ 8 31 18	—1 23
Mar.	15	4	41	58	10	13	19	☿ 15 20 6	☿ 15 21 28	+1 22
Aprii.	14	5	1	35	11	9	24	☿ 18 4 58	☿ 18 5 51	+0 53
	15	5	51	2	11	10	17	☿ 0 48 58	☿ 0 50 33	+1 35
	17	7	31	0	11	12	4	☿ 27 19 54	☿ 27 21 13	+1 19
Aprii.	19	9	12	50	11	13	51	☿ 25 44 27	☿ 25 44 54	+0 27
Maii.	15	6	14	2	0	6	0	☿ 5 39 50	☿ 5 39 55	+0 5
	16	7	3	15	0	6	52	☿ 19 27 43	☿ 19 27 20	—0 23
	18	8	45	7	0	8	38	☿ 18 33 57	☿ 18 31 42	—2 15
	19	9	39	9	0	9	31	☿ 3 51 30	☿ 3 49 30	—2 0
	20	10	36	7	0	10	24	☿ 19 34 34	☿ 19 31 37	—2 57

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ
CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXVIII. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annuum.	Distantia ☾ à ☉	Longitudo Centri Lunæ Observata.	Longitudo Centri Lunæ Comput.	Error Comp.							
M.	D.	H.	'	"	S.	o	'	o	'	"	o	'	"	'	"	
Junii.	11	4	11	14	0	28	51	♊	1	19	40	♊	1	21	1	+1 21
Cent.	14	6	38	21	1	1	28	♊	12	42	47	♊	12	41	35	-1 12
	15	7	28	20	1	2	21	♊	27	18	40	♊	27	15	48	-2 52
	18	10	18	9	1	5	0	♊	13	23	19	♊	13	17	34	-5 45
Julii.	15	8	5	13	1	27	49	♊	6	49	22	♊	6	45	54	-3 28
	16	9	4	5	1	28	42	♊	22	2	25	♊	21	58	20	-4 5
	17	10	4	31	1	29	35	♊	7	19	0	♊	7	14	36	-4 24
Julii.	30	20	46	40	2	11	2	♊	0	55	50	♊	0	56	31	+0 41
Aug.	11	5	59	18	2	20	46	♊	1	56	44	♊	1	57	27	+0 43
Sept.	11	7	44	20	3	17	36	♊	26	12	32	♊	26	11	39	-0 53
	12	8	39	43	3	18	30	♊	10	27	10	♊	10	26	7	-1 3
Sept.	13	9	32	41	3	19	25	♊	24	29	0	♊	24	28	6	-0 54
Octo.	8	5	40	0	4	11	12	♊	21	51	18	♊	21	53	6	+1 48
Octo.	11	8	20	0	4	13	57	♊	3	52	26	♊	3	52	3	-0 23
Nov.	5	4	29	57	5	6	3	♊	1	19	33	♊	1	16	42	-2 51
	6	5	25	42	5	6	59	♊	15	44	57	♊	15	41	55	-3 2
	8	7	6	45	5	8	50	♊	13	16	46	♊	13	14	2	-2 44
Nov.	10	8	37	44	5	10	41	♊	9	27	12	♊	9	27	5	-0 7
Dec.	8	7	20	36	6	5	49	♊	18	10	47	♊	18	9	9	-1 38
* 12	5	27	6		6	9	22	♊	5	28	48	♊	5	30	5	+1 17

Anno JULIANO MDCCXXXIX. Currente.

Feb.	2	4	38	49	7	26	7	♊	3	39	5	♊	3	29	45	+0	40
	3	5	23	54	7	27	3	♊	16	25	30	♊	16	26	2	+0	32
	4	6	9	14	7	27	58	♊	28	56	8	♊	28	56	18	+0	10
Feb.	6	7	42	6	7	29	48	♊	23	28	33	♊	23	29	28	+0	55
Mart.	5	5	34	54	8	23	40	♊	18	27	25	♊	18	29	30	+2	5
	7	7	10	40	8	25	29	♊	12	55	36	♊	12	57	47	+2	11
	8	7	59	4	8	26	24	♊	25	13	13	♊	25	15	38	+2	25
	9	8	47	28	8	27	18	♊	7	40	43	♊	7	43	13	+2	30
	10	9	35	38	8	28	13	♊	20	23	55	♊	20	25	6	+1	11

LUNÆ MERIDIANÆ LONGITUDINES
GRENOVICI OBSERVATÆ

CUM COMPUTO NOSTRO COLLATÆ.

Anno JULIANO MDCCXXXIX. Currente.

Transitus Limbi Lunæ T. æq.					Argument. Annum.			Distantia ☾ à ☉			Longitudo Centri Lunæ Observata.				Longitudo Centri Lunæ Comput.				Error Comp.			
M.	D.	H.	'	''	s	°	'	s	°	'	°	'	''	°	'	''	'	''				
Apri.	3	5	3	14	9	18	59	2	13	15	☿	7	55	32	☿	7	55	47	+	0	15	
	7	8	14	32	9	22	34	3	29	51	♌	27	33	30	♌	27	34	34	+	1	4	
	8	9	1	42	9	23	28	4	12	0	♍	10	37	0	♍	10	37	42	+	0	42	
Apri. Maii	30	2	56	57	10	12	10	1	12	8	☿	3	12	20	☿	3	10	19	—	2	1	
	1	3	45	10	10	13	3	1	23	24	☿	15	23	32	☿	15	22	45	—	0	47	
	4	6	7	20	10	15	42	2	27	54	♌	22	12	20	♌	22	14	2	+	1	42	
	6	7	39	51	10	17	28	3	22	4	♍	17	54	7	♍	17	54	23	+	0	16	
	7	8	26	33	10	18	21	4	4	39	♎	1	22	13	♎	1	21	21	—	0	52	
	9	10	5	48	10	20	7	5	0	58	♎	29	49	15	♎	29	47	35	—	1	40	
	21	21	2	59	11	0	43	10	15	12	♏	25	54	0	♏	25	51	50	—	2	10	
Junii	3	6	19	30	11	11	15	3	2	45	♏	25	41	36	♏	25	40	0	—	1	36	
	29	3	32	59	0	3	11	1	20	17	♏	8	30	0	♏	8	28	46	—	1	14	
	30	4	16	26	0	4	3	2	2	4	♏	21	8	37	♏	21	9	16	+	0	39	
	Julii	1	5	1	10	0	4	55	2	14	12	♐	4	9	8	♐	4	7	22	—	1	46
		2	5	46	40	0	5	48	2	26	43	♐	17	28	18	♐	17	26	8	—	2	10
		4	7	25	20	0	7	33	3	23	3	♑	15	27	2	♑	15	23	30	—	3	32
5		8	18	8	0	8	26	4	6	51	♑	0	8	52	♑	0	5	28	—	3	24	
6	9	16	10	0	9	19	4	21	2	♑	15	21	38	♑	15	16	54	—	4	44		
Octo.	27	5	38	5	3	17	9	2	23	32	♒	8	30	54	♒	8	30	58	+	0	4	
	::	28	6	33	58	3	18	5	3	7	23	♒	23	6	17	♒	23	5	37	—	0	40
	::	29	7	27	4	3	19	0	3	21	3	♒	7	33	10	♒	7	31	7	—	2	3
Dec.	26	6	36	30	5	11	8	3	9	12	♓	24	54	50	♓	24	53	37	—	1	13	
	27	7	22	49	5	12	3	3	21	45	♓	8	18	37	♓	8	18	44	+	0	7	

F I N I S.

LUNE MERIDIENNE LONGITUDINE
 GRENORIO ORRERY
 CUM COMPUTO NOTTO GOLFAT
 Anno 1714 MDCCXIV

Longitudo	Latitudo	Longitudo	Latitudo	Longitudo	Latitudo
10	10	10	10	10	10
11	11	11	11	11	11
12	12	12	12	12	12
13	13	13	13	13	13
14	14	14	14	14	14
15	15	15	15	15	15
16	16	16	16	16	16
17	17	17	17	17	17
18	18	18	18	18	18
19	19	19	19	19	19
20	20	20	20	20	20
21	21	21	21	21	21
22	22	22	22	22	22
23	23	23	23	23	23
24	24	24	24	24	24
25	25	25	25	25	25
26	26	26	26	26	26
27	27	27	27	27	27
28	28	28	28	28	28
29	29	29	29	29	29
30	30	30	30	30	30
31	31	31	31	31	31
32	32	32	32	32	32
33	33	33	33	33	33
34	34	34	34	34	34
35	35	35	35	35	35
36	36	36	36	36	36
37	37	37	37	37	37
38	38	38	38	38	38
39	39	39	39	39	39
40	40	40	40	40	40
41	41	41	41	41	41
42	42	42	42	42	42
43	43	43	43	43	43
44	44	44	44	44	44
45	45	45	45	45	45
46	46	46	46	46	46
47	47	47	47	47	47
48	48	48	48	48	48
49	49	49	49	49	49
50	50	50	50	50	50
51	51	51	51	51	51
52	52	52	52	52	52
53	53	53	53	53	53
54	54	54	54	54	54
55	55	55	55	55	55
56	56	56	56	56	56
57	57	57	57	57	57
58	58	58	58	58	58
59	59	59	59	59	59
60	60	60	60	60	60
61	61	61	61	61	61
62	62	62	62	62	62
63	63	63	63	63	63
64	64	64	64	64	64
65	65	65	65	65	65
66	66	66	66	66	66
67	67	67	67	67	67
68	68	68	68	68	68
69	69	69	69	69	69
70	70	70	70	70	70
71	71	71	71	71	71
72	72	72	72	72	72
73	73	73	73	73	73
74	74	74	74	74	74
75	75	75	75	75	75
76	76	76	76	76	76
77	77	77	77	77	77
78	78	78	78	78	78
79	79	79	79	79	79
80	80	80	80	80	80
81	81	81	81	81	81
82	82	82	82	82	82
83	83	83	83	83	83
84	84	84	84	84	84
85	85	85	85	85	85
86	86	86	86	86	86
87	87	87	87	87	87
88	88	88	88	88	88
89	89	89	89	89	89
90	90	90	90	90	90
91	91	91	91	91	91
92	92	92	92	92	92
93	93	93	93	93	93
94	94	94	94	94	94
95	95	95	95	95	95
96	96	96	96	96	96
97	97	97	97	97	97
98	98	98	98	98	98
99	99	99	99	99	99
100	100	100	100	100	100

Errata.				Errores.				Corrisiones.			
In Tabulis Mediorum Mot. Lunæ.				s	o	i	ii	s	o	i	ii
Maii 16. ————— -				11	21	59	53	11	21	59	23
In Observationum Tabulis.											
1723.	Jul. 14.	Lunæ transitus	- - -		19 ^h	12	22		19	12	30
1725.	Mar. 11.	Ascensio Recta obs.	- - -		112	29	57		112	29	0
	Sept. 5.	Ascens. rect. comp.	- - -		290	59	40		290	57	8
	Oct. 11.	Ascens. rect. comp.	- - -		43	57	48		43	53	53
	Nov. 2.	Lunæ transitus	- - -		6 ^h	28	8		6	38	8
	Dec. 2.	Lunæ transitus	- - -	2 ^d	6	0	9	1 ^d	6	0	9
1726.	Mar. 30.	Longit. Lunæ comp.	- - -	Ω	7	19	9	Ω	7	15	51
	Aug. 20.	Error Computi	- - -		+	0	43		—	0	43
1728.	Apr. 2.	Longit. Lunæ comp.	- - -	Π	8	48	44	Π	8	46	44
1730.	Maii 11.	Longit. Lunæ comp.	- - -	Ω	4	2	18	Ω	3	58	0
	Dec. 5.	Lunæ transitus	- - -		5	57	16		5	58	16
1731.	Sept. 2.	Longit. Lunæ comp.	- - -	≡	27	47	45	≡	20	47	45
	9.	Longit. Lunæ obs.	- - -	Π	7	11	34	Π	6	11	34
1732.	Sept. 21.	Longit. Lunæ obs.	- - -	⋈	14	14	18	⋈	24	14	18
		comp.	- - -	⋈	14	8	10	⋈	24	8	10
	Nov. 15.	Longit. Lunæ comp.	- - -	⋈	25	25	26	⋈	25	22	26
1733.	Jun. 20.	Lunæ transitus	- - -		15	21	29		15	51	29
	Jul. 7.	Longit. Lunæ obs.	- - -	⊲	22	41	53	⊲	23	41	53
	Nov. 4.	Error Computi	- - -		+	0	29		—	0	29
1734.	Jan. 31.	Distantia D à 0	- - -		8	3	33		3	8	33
	Feb. 27.	Longit. Lunæ comp.	- - -	8	25	50	40	8	26	50	40
	Apr. 12.	Lunæ transitus	- - -		16	43	43		16	33	43
	Maii 13.	Longit. Lunæ comp.	- - -	≡	15	21	59	≡	25	21	59

In Tabula Medicorum Not. I. nax.

Manu 10.

In Observationum Tabula.

1733	Jul 14	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Mar 14	Alcedo Reda old	-	-	-	17 21 22 23	11 21 22 23
1733	Aug 4	Alcedo Reda comp	-	-	-	17 21 22 23	11 21 22 23
1733	Oct 11	Alcedo Reda comp	-	-	-	17 21 22 23	11 21 22 23
1733	Nov 2	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Dec 2	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Mar 30	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1733	Aug 30	Alcedo Reda comp	-	-	-	17 21 22 23	11 21 22 23
1733	Apr 2	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1733	Mar 11	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1733	Dec 3	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Sept 2	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1733	Oct 9	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Sept 21	Luna vultus old	-	-	-	17 21 22 23	11 21 22 23
1733	Nov 15	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1733	Jan 20	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1733	Jul 7	Luna vultus old	-	-	-	17 21 22 23	11 21 22 23
1733	Nov 4	Alcedo Reda comp	-	-	-	17 21 22 23	11 21 22 23
1734	Jan 31	Alcedo Reda comp	-	-	-	17 21 22 23	11 21 22 23
1734	Feb 27	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23
1734	Apr 12	Luna vultus	-	-	-	17 21 22 23	11 21 22 23
1734	Mar 13	Luna vultus comp	-	-	-	17 21 22 23	11 21 22 23

P R E F A C E.

WE here offer to the Public the celebrated Dr. Halley's long expected Tables of the Sun and Planets, which were sent to the Press in the year 1717, and printed off in 1719. There wanted only Precepts for using them, and some few Tables commonly inserted in works of this kind, when in the year 1720 our Author being appointed Successor to Mr. Flamsteed in the Royal Observatory, laid aside the thoughts of publishing them so soon as he had intended, that he might compare the Lunar numbers with his own Observations, and thereby be enabled to publish a Table of their Errors at the same time. He had long earnestly wished to see somewhat of this kind done by others, that the quantities of such Equations of the Moon as are already known, might be more exactly determined, and such as are still unknown, discovered. And relying on the uncommon vigour of his constitution he undertook this laborious work himself in the 64th year of his age, and beyond all expectation compleated it.

When he first came to the Observatory he found it destitute of Instruments, for those which Mr. Flamsteed had used, being his own property were taken away by his Family: But in the year 1721 having fixed a Transit Instrument in the Meridian, he diligently observed the R. Ascensions of the Moon during the four following years, till the great Mural Quadrant was finished and put up at the public expence in the year 1725; whereby he was enabled to determine her Longitudes from observation. Hence in the Tables entitled, *Lunæ Meridianæ &c.* we find the Moon's observed Longitudes compared with the Tables from December 5, 1725, to the end.

Had our Author published these Tables himself, he would doubtless have given some account of the Observations he made use of for their construction; and perhaps might have shewn how to correct them in some places from his later Observations. This is not to be expected from us. We shall only apprize the Reader of some particulars, the better to enable him to form a true judgment of them.

Our Author made use chiefly of Mr. Flamsteed's Observations, which though taken with great care, and most faithfully entered in his Books, yet there were too few of the Sun to determine the Solar numbers with sufficient exactness: and Dr. Halley used frequently to complain of this deficiency. To this it is owing that he could not determine either the Species or Position of the Earth's Orbit exactly; much less could he discover any Equation to the motion of its Aphelion, or the other small Equations by which its Orbit is affected: For these are not to be found out, nor their quantities deter-

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mined, but by a long series of the nicest Observations. To this we may add that neither the Aberration of the Light of the fixt Stars, nor the Equation to the Precession of the Equinoctial points, nor that of the Nutation of the Earth's Axis were at that time known; for the discovery of all which the world is obliged to the wonderful skill, diligence, and sagacity of our great Astronomer the Reverend Dr. Bradley, F. R. S. Savilian Professor of Astronomy in the University of Oxford, and our Author's most worthy Successor in the Royal Observatory. These Equations, though small, are sufficient to produce a sensible appearance of Error in good Observations, and had greatly perplexed Mr. Flamsteed. And as all Astronomy depends on a true knowledge of the Earth's motion in its Orbit, Errors in the Solar numbers cannot but produce Errors likewise in those of the Planets.

Such as are sensible of the almost infinite number of Observations which must be examined and compared to determine the Quantities of the Lunar Equations, will be the best judges of the pains our Author must have taken in constructing his Tables of the Moon, and of his skill and contrivance therein. With what candor he purposed to have imparted them to the Public is manifest in that he never intended to offer them as perfect, rather chusing to omit some Equations for whose determination he wanted proper Observations, and at the same time resolving to publish what Errors he should find in them from his own Observations.

Our Author in finding the R. Ascension of the Moon by observation, made use of the Britannic Catalogue for the places of the Fixt Stars, in which some of them are ill determined; and if we had any hopes that his Observations would ever be made public it might be worth the while to give a list of those Stars, with the quantities of their Errors, that the observed places of the Moon deduced from them might be corrected.

We wish our Author had printed his Observations, for the publication of astronomical Observations is of very great importance as they never become obsolete like Tables, but on the contrary the usefulness of such as are carefully made and faithfully delivered is greatly encreased by their antiquity. It were therefore much to be wished that the Observations made at the Royal Observatory, were printed off from time to time at the public expence; for the more diligent the Observer is, the more is the Public concerned in the preservation of his Labours, and the less suitable is the expence to the circumstances of a private Person.

*In the year 1725 Dr. Halley published some corrections of his Tables of Mercury in the Philosophical Transactions (N^o 386) where he determines
the*

THE PREFACE.

the mean Longitude of that Planet at the commencement of the Julian Year 1723 to be $\text{I } 19. 09. 31$; and finds its mean Motion in 100 Julian Years $2. 14. 2. 13''$, and the distance of its ascending Node from the first Star of Aries $0. 15. 41''$.

Our Author received the Tables of Jupiter's Satellites from the Reverend Dr. Bradley in the year 1718. They do not answer to the Observations at this time, which was not unforeseen by their learned Author, as appears by his Notes.

The Synopsis of the Astronomy of Comets was printed off at the same time as the Tables.

*The Tables entitled, *Lunæ Meridianæ &c.* were sent to the Press at different times as the Author deduced them from his Observations.*

We shall now inform the Reader what has been done in order to prepare this work for the Public.

There wanted convenient Tables of the mean Conjunctions of the Sun and Moon, a Table of Refractions, and another of the Longitudes and Latitudes of remarkable Places, all which we have inserted in their proper order.

The Reverend Dr. Bradley very kindly favoured us with the Tables of the mean Conjunctions of the Sun and Moon, and that of the Lunar Periods, which were constructed in a very commodious form by that excellent Astronomer the late Reverend Mr. Pound. The Table of Lunar Periods is of use in finding the returns of Eclipses, and therefore we have omitted Dr. Halley's Table of the Eclipses which had happened in 223 Lunations from the year 1701 to 1718 with Equations which he had made for that purpose and called ^a the Plinian Period, both because it is less accurate and after a few Periods elapsed becomes of little use. The Table of Refractions is the same our Author always used. The Places inserted in the Table of Longitudes and Latitudes are chiefly such as are remarkable either for antient Eclipses or modern Observations: We wish the Observations from which the greater part of them are deduced were more to be depended on. We have retained the Elevation of the Pole at the Royal Observatory which Mr. Flamsteed and Dr. Halley used in their calculations, though it is somewhat too small.

*In the Precepts we have strictly adhered to the method Dr. Halley observed in computing the Place of the Moon, that the Errors of computation might not differ from those in the Tables entitled, *Lunæ Meridianæ &c.* For if the fourth Equation of the Moon be used after that of the*

^a See *Phil. Trans.* N^o 194. p. 535.

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Center, or that rough correction of the argument of the fourth Equation directed in the Margin of the last page of Sheet (b,) be neglected, the difference of Error may sometimes amount to half a Minute, which would make the Errors found in the Table of less use in correcting the computed Places.

And here it is proper to inform the Reader, that it appears from Dr. Halley's Papers, that both in computing the R. Ascension of the Moon's Limb, and in finding the Longitude of her Center from Observation, he constantly used the apparent instead of the true Semidiameter of the Moon; and consequently from the beginning of the Table Lunæ Meridianæ &c. to the latter end of the year 1725 from the New to the Full Moons, while the Western Limb was observed, the computed R. Ascensions of that Limb are set down too backward; and during the remainder of the Month while the Eastern Limb was observed, the computed R. Ascensions of that Limb are set down too forward: And from the year 1725 the Longitudes of the Moon's Center deduced from the observations of her Western Limb are set down too forward, and those from the observations of her Eastern Limb too backward. This Error is not considerable, and seldom exceeds a quarter of a Minute, therefore in common cases it may be neglected, for which reason we have taken no notice of it in the Precepts: But if any one shall undertake to correct the Moon's mean Motion, or to new model the Equations, it will be necessary to correct the Errors found in the Table by the Excess of the Moon's apparent Semidiameter in R. Ascension or Longitude, above her horizontal Semidiameter of the like denomination.

We have endeavoured to be as concise in the Precepts as possible, but for the sake of Mariners, have explained the method of finding the Longitude at Sea from Observations of the Moon, by several Examples.

A D V E R T I S E M E N T.

The Author of the *Latin* Precepts having been desired to revise this Translation of them, hath thought fit to make some alterations and additions.

He desires the Reader will please to correct the following Errors in the *Latin*, which escaped his notice while it was printing off.

Corrigenda in Præceptis Latinis.

P. (b) 2. l. 22. *pro* 5. 24. 4. 40. *lege*, 5. 24. 4. 59. *ibid.* l. 26. *pro* distantia $\mathcal{D}$ à $\odot$, *lege*, differentia:
 p. (c) l. 10. *dele*, maximæ. *ibid.* l. 15. *dele*, maximæ, *ibid.* l. 26. 27. *verba*, Tabulâ—ad distantiam Lunæ a
 Syzygiâ propiore, *litteris Romanis erant exprimenda.* p. (d) 4. l. 4. *pro* 5. 59. 47. *lege*, 4. 59. 47. p. (e) 1. l.
 23. *pro* γ *lege* β . p. (e) 2. l. 26. *dele*, Orbitæ. p. (e) 3. l. 9. *dele* Orbitæ. p. (Qq 2) Aph. $\S$ *pro* $\S$ 12.
lege $\S$ 13. *ibid.* Nod. $\S$ *pro* $\S$ 14. *lege* $\S$ 15.

Precepts for using the Tables.

NOTE I.

Of astronomical Time.

APPARENT time is reckoned from the passage of the Sun's Center over the Meridian of any Place to its return to the same; for in that interval of time is one natural day compleated. But these days being unequal to each other, the mean or equal motions of the Sun and Planets cannot well be adapted to them; therefore Astronomers have supposed a mean day, to the noon of which they set down the mean Places. This, in the following Precepts, we shall call the Mean Noon. If then, the Place of the Sun or a Planet be sought, for any given instant of apparent time, the mean time answering thereto must be found by the Tables of the Equations of Time (C c 3) and the mean place of the Sun or Planet must be sought to that mean time.

NOTE II.

Of the Tables of Epochs.

The mean Places of the Sun and Planets in the Tables of Epochs are to the Mean Noon of the last day of the preceding *Julian* year. Thus the Sun's Mean Anomaly in the Table of Epochs answering to the year 1722, is his Mean Anomaly to that fictitious Noon on *December 31, 1721*. The Tables are adapted to the Time of the Meridian of the Royal Observatory at *Greenwich*.

PRECEPTS FOR COMPUTING THE PLACE OF THE SUN.

To find the Sun's true Longitude for any given time.

1. From the Tables entitled, *Epochæ mediorum motuum Solis & primæ Stellæ Arietis*; (D d &c.) and *Motus Anomalicæ mediæ Solis &c.* (D d 3 &c.) collect the Sun's Mean Anomaly and the place of his Apogee for the given year, day, and time of the day.

2. The

2. To the Sun's mean Anomaly for the given time add the Longitude of his Apogee, the Sum will be the Sun's Mean Longitude.

3. In *Tabula Aequationum Solis* (E e 3) find the Equation corresponding to the Sun's Mean Anomaly, which according to its Title being added to, or subtracted from, the Sun's Mean Longitude, will give his true Longitude to the mean time of the Tables.

4. If the given Time be apparent, seek the Equation corresponding to the Sun's true Longitude in the first of the Tables entitled, *Tabulae Aequationis Temporis*, (C c 3) and that corresponding to his mean Anomaly in the other Table in the same page. Their sum, if both be to be added or subtracted; or their difference, if one be to be added and the other subtracted, will be the absolute Equation of Time, by which the given apparent time must be encreased or diminished to reduce it to Mean. And the Sun's true Longitude found over again to this mean time will be his true Longitude at the apparent time given. Or if the Sun's true Longitude first found be corrected by adding or subtracting an Arc of his mean Motion answering to the absolute Equation of time, it will give his true Longitude for the apparent time very nearly.

Tabula Aequationis Temporis compositae is a Table of the Absolute Equation of Time answering to the Sun's true Longitude, but this Table is not perpetual on account of the Motion of the Sun's Apogee.

E X A M P L E.

Required the true Longitude of the Sun on the apparent Noon of the 20th of January, 1722.

In the Table *Epochae mediorum motuum &c.* the Sun's Mean Anomaly to the Year 1722 is $6^{\circ}. 12'. 37''. 56''$, and the place of his Apogee $\approx 8^{\circ}. 0'. 24''$, or $3^{\circ}. 8'. 0''. 24''$. to these add the motion of his Mean Anomaly to Jan. 20, $0^{\circ}. 19'. 42''. 43''$, and that of his Apogee (whose monthly motion is found at the bottom of each month) $3''$, their sums will be $7^{\circ}. 2'. 20''. 39''$ the Sun's Mean Anomaly, and $3^{\circ}. 8'. 0''. 27''$ the place of his Apogee on the Mean Noon of the 20th of January 1722. And these added together give $10^{\circ}. 10'. 21''. 6''$ for the Sun's mean Longitude at that time. The Equation of the Center in *Tabula Aequationum Solis* to $7^{\circ}. 2'$ of Mean Anomaly is $1^{\circ}. 2'. 47''$, that to $7^{\circ}. 3'$ is $1^{\circ}. 4'. 31''$, their difference $1'. 44''$; and as while the Sun's M. Anomaly encreases, the Equation encreases likewise, add $36''$, the proportional part of this difference, to the lesser Equation $1^{\circ}. 2'. 47''$, it will give $1^{\circ}. 3'. 23''$ for the Equation to the M. Anomaly $7^{\circ}. 2'. 20''. 39''$, which added (as the Table directs) to the mean Longitude of the Sun gives $\approx 11^{\circ}. 24'. 29''$ the Sun's true Longitude to the mean Time of the Tables.

Seek now the Equation of Time, and that part of it which depends on the Sun's Place $\approx 11^{\circ}. 24'$ will be found 9 m. 52 s. and the other part answering to his M. Anomaly $7^{\circ}. 2'. 20''. 4 m. 13 s.$ which according to the Tables are both additive, therefore their sum 14 m. 5 s. is the absolute Equation of Time, which added to the apparent time given will convert it into Mean. Therefore to obtain the Sun's true Place to the given apparent time correctly, the computation should be made over again to 14 m. 5 s. after the Mean Noon of the Tables. But if an Arc of $35''$, which is the Sun's Mean Motion in 14 m. 5 s. be added to the true Longitude above found, it will become $\approx 11^{\circ}. 25'. 4''$ his true Longitude (very nearly) on the apparent Noon of January 20, 1722.

The Form of the Calculation.

		☉ m. Anom.				☉ Apogee.			
		'	°	'	"	'	°	'	"
A. D.	1722	6	12	37	56	3	8	0	24
Jan.	20	0	19	42	43				3
		7	2	20	39	3	8	0	27
		3	8	0	27				
☉ m. Long.		10	10	21	6				
Eq. of the Cent.		+	1	3	23				
		☿	11	24	29				
Correction for Eq. Time		+	35						
		☿	11	25	4				

1st part of the Eq. of Time	+	m.	s.
		9	52
The other part	— — —	+	
		4	13
Absolute Equ. of Time	—	+	14 5
☉ true Longitude Jan. 20, 1722, nearly.			

1st part of the Eq. of Time + m. s.
The other part — — — + 9 52
4 13

Absolute Equ. of Time — + 14 5

☉ true Longitude Jan. 20, 1722, nearly.

Having found the Sun's true Longitude, his Declination may be obtained from the Table entitled, *Tabula Declinationum punctorum Eclipticæ* (B b) and his R. Ascension from *Tabula Ascensionum rectarum punctorum Eclipticæ* (B b 2 &c.)

PRECEPTS FOR THE TABLES OF THE MOON.

The Year and Month being given, to find the mean times of the Syzygies.

1. From the Tables *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) and *Revoluciones Lunæ ad Solem in mensibus anni communis* (** E e) collect the days and parts of a day answering to the given Year and Month, and likewise the Sun's mean Anomaly, and the mean distances of the Sun from the Moon's Apogee and Node. In Leap Years subtract one from the number of days in the Months after *February*. If the Opposition be sought, add half a Synodical Month (which, with the mean Motions answering thereto, is at the bottom of the Table of Months) to the Time of Conjunction found as above, and the Mean Motions for the half Month to the Mean Motions at the Conjunction.

2. From *Tabula Æquationum annuarum* &c. (L 1 3 &c.) take out the Equations of the Moon's Apogee and Node answering to the Sun's mean Anomaly, which being applied, with contrary Signs to those directed in the Tables, to the Sun's mean distances from the Moon's Apogee and Node, will give his distance from each once equated. Add to these, or subtract from them (according as the Table shall direct) the Equation of the Sun (found by the third Precept of the Sun) and the former will be the Annual Argument of the Moon; the latter, the true distance of the Sun from the Node once equated.

3. The mean distance of the Sun from the Moon's Apogee once equated, subtracted from the Sun's mean Anomaly, is the Argument of the fourth Equation of the Moon in the Conjunctions. But in the Oppositions, both this Argument and the Annual Argument must be increased by fix Signs.

4. In *Tabula Æquationum annuarum Lunæ* (L 1 3 &c.) find the Moon's Annual Equation answering to the Sun's mean Anomaly. In the Table entitled *Æquatio semestris altera* (M m) find the third Equation of the Moon answering to the Sun's distance from the Node. In the Table *Æquatio Lunæ quarta* (ibid.) find the fourth Equation to its proper Argument. And lastly in *Tabula Æquationum Lunæ in Syzygiis* (O o 3) find the Equation answering to the annual Argument. The sum of these Equations whenever the true Syzygy happens at the same time with the Mean (which is but seldom) will be equal to the Equation of the Sun's Center. But when the

true

true Syzygy precedes the Mean, the sum of these Equations will exceed that Equation: And when the Mean Syzygy precedes the true, the Sun's Equation will exceed the Sum of these Equations of the Moon. The difference therefore between this Sum and the Equation of the Sun, by means of the Table *Motus medii Lunæ à Sole* (** E c 2) will give the time between the Mean Syzygy and the true, very nearly.

EXAMPLE I.

Required the mean time of New Moon in July in the year 1684.

	Mean conjunc.	☉ me. Anom.	☉ from D apog.	☉ from ☉	
	D h m s	° ' "	° ' "	° ' "	
1684.	6 13 22 38	6 18 57 15	9 19 6 8	6 0 25 39	
June, leap year.	25 4 24 18	5 24 37 56	5 4 54 3	6 4 1 24	1st Eq. D + 0 2 41
July	1 17 46 56	0 13 35 11	2 24 0 11	0 4 27 3	3d — 0 0 6
Diff. ☉ Eq. D Eq. +	8 54 6	-2 24 4 47	+ 4 36	- 2 11	4th — 0 2 16
8 July	2 2 41 2	9 19 30 24	2 24 4 47	0 4 24 52	Eq. in syz. — 4 58 24
		Arg. 4th Eq.	— 26 47	— 26 47	Sum — 4 58 5
			2 23 38 0	0 3 58 5	☉ Equation — 0 26 47
			Annual Arg.	☉ fr. ☉	Diff. 4 31 18
					Hours 8 = 4 3 49
					Min. 54 = 27 29
					Sec. 6 = 0 3

Therefore the mean time of Conjunction in the Month of July, A. D. 1684, was July 2, 2. h. 41. m.

EXAMPLE II.

Required the mean time of Full Moon in August in the year 1681.

	Mean conjunc.	☉ me. Anom.	☉ à D Apog.	☉ à ☉	
	D h m s	° ' "	° ' "	° ' "	
1681.	8 22 12 45	6 22 3 19	1 23 52 52	4 5 37 4	1st Eq. D + 0 10 9
July	25 17 8 21	6 23 44 15	6 0 43 3	7 4 41 38	3d + 0 0 10
½ Syn. Mon.	14 18 22 2	0 14 33 10	0 12 54 30	0 15 20 7	4th — 0 0 19
August	18 9 43 8	2 0 20 44	8 7 30 25	11 25 38 49	Eq. in Syz. — 4 40 41
Diff. ☉ Eq. D Eq. +	5 36	-8 7 47 37	+ 17 12	- 8 11	Sum — 4 30 41
8 Aug.	18 15 19	5 22 33 7	8 7 47 37	11 25 30 38	☉ Equation — 1 40 2
		+6	— 1 40 2	— 1 40 2	Diff. 2 50 39
		11 22 33 7	8 6 7 35	11 23 50 36	Hours 5 = 2 32 23
		Arg. 4th Eq.	Annual Arg.	☉ à ☉	Min. 36 = 18 16
			+ 6		
			2 6 7 35		
			Arg. Equ. in Syz. 8		
			D h m		

Therefore the Opposition happened Aug. 18 15 19 mean Time.

The Times thus found will differ somewhat from the truth, and are to be corrected by finding the true place of the Moon by the Anomalistic Tables (F f &c.) according to the Precepts following.

To find the true place of the Moon to any given mean Time of Conjunction or Opposition.

1. Find the Sun's true Longitude to the given time, and set down his Mean Anomaly to Thirds.
2. In the Tables *Epochæ mediorum motuum Lunæ existente Terra in Aphelio*, (F f &c.) find the Mean Longitudes of the Moon, her Apogee, and Node to the time when the Earth was last in its Aphelion.
3. From the Tables entitled, *Medii motus Lunæ Apogæi & Nodorum ad gradus Anomalie mediæ Solis* (F f 4 and following) and *Medii motus Lunæ Apogæi & Nodorum ad minuta Anomalie mediæ Solis* (H h 2) take out the mean Motions of the Moon, her Apogee, and Node, answering to the Sun's Mean Anomaly: Add these motions of the Moon and Apogee to the former, and subduct that of the Node; and you will have the places of the Moon, Apogee and Node once equated.
4. The distance of the Sun from the Moon's Node once equated, is the Argument of the third Equation of the Moon entitled, *Æquatio semestris altera* (M m). The place of the Sun's Apogee, subtracted from the place of the Moon's Apogee, is the Argument of the fourth Equation, *Æquatio Quarta Lunæ* (ibid.) in the Conjunctions; but in the Oppositions this quantity must be encreased by the addition of fix Signs. The Annual Argument in the Conjunctions, and the same encreased by fix Signs in the Oppositions, is the Argument of *Tabula Æquationum Lunæ in Syzygiis* (O o 3). And by the proper application of these Equations the true place of the Moon in her Orbit will be obtained.
5. The place of the Node subtracted from the true place of the Sun, in the Conjunctions; but from its opposite, in the Oppositions, is called the Argument of Latitude in the Syzygies; to which the Latitude of the Moon, and the Reduction of her place in her Orbit to the Ecliptic, are found in *Tabula Latitudinaria Lunæ in Syzygiis* (O o 4).
6. If the given time be found to differ from that of the true Syzygy, it may be corrected by the Table *Motus horarii Lunæ à Sole* (** E e 2).

E X A M P L E I.

Required the Moon's true place at the time of New Moon before found, A.D. 1684, July 2, 2h. 41 m. mean time, and thence the correct time of Conjunction.

	☉ Mean Anom.	☉ Apogee			
1684	6° 12' 29" 28" 46"	3° 7' 21" 59"			
Biff. July 2	6 1 21 2 3	30	☽ mean long.	☽ Apogee	☽ ☉
Hours 2	4 55 41		1684	9 19 19 19	0 25 25 13
Min. 41	1 41 1			5 23 50 19	1 23 46
			☉ M. An. 13°	57'	39 49
☉ M. Anom.	0 13 57 7 31			12 42 2	3 4
☉ Apogee	3 7 22 29			1 33	
				31"	7
☉ M. long.	3 21 19 36				
☉ Equation	— 27 29				
☉ Long.	3 20 52 7		3d Equ.	3 25 53 20	0 26 55 26
			4th.	— 0 7	9 19 32 57
			Eq. in Syz.	— 2 16	0 4 20 38
				4 58 28	2 23 56 41
			☽	3 20 52 29	Annual Arg.
			☉	3 20 52 7	0 22 47 N
					Lat. ☽.
			Distance ☽ from ☉	0 0 0 22	
			(b)		

The

The Moon therefore had passed the Conjunction by an Arc of 22", and the true Conjunction preceded the given time by about 44 seconds of an hour; (for in that space of Time the Moon's mean motion from the Sun is 22".) Therefore the true Conjunction was at 2^h. 40^m. 16^s. of mean time.

The absolute Equation of Time was then 4^m. 58^s additive, subtract it therefore from the Mean Time here found, and we shall have 2^h. 35^m. 18^s for the apparent time of the New Moon.

EXAMPLE II.

Required, the Moon's true place at the time of Full Moon before found, A. D. 1681, Aug. 18, 15^h. 19^m. mean time, and thence the correct time of Opposition.

	☉ M. Anom.	☉ Apogee	☽ M. Long.	☽ Apogee	☽ 8
1681.	6° 13' 15" 29 56	3° 7' 18" 57			
Aug. 18.	7 16 41 17 34	38			
Hours 15.	36 57 36				
Min. 19.	46 49	3 7 19 35			
☉ M. Anom.	2 0 34 31 55		1681	8° 10' 54" 55	8° 23' 20" 30
Apogee	3 7 19 35		Signs 2.	2 22 18 8	6 29 48
			Min. 34.	7 34 33	3 51
			31" 55"	7 7	4
☉ M. Long.	5 7 54 7				
Equation	— 1 40 16				
☉ true Long.	5 6 13 51		3d Equat.	+ 0 0 10	11 22 34 38
☽ Apogee	8 29 54 13		4th Eq.	— 0 0 19	Arg of 4thEq.
			Eq. in Syz.	— 4 41 2	5 24 4 59
	2 6 19 38				Arg. of Lat. in 8
	Annual Arg. in 8		☽ 11 6 13 32		☽ Lat. 0 31 0 N.
			☉ 5 6 13 51		
			Distance of ☽ from ☉	5 29 59 41	

Here the Moon is 19" behind the Opposition, which her mean motion from the Sun will compleat in 38 seconds. Therefore the true Opposition was at 15^h. 19^m. 38^s of mean Time, nearly.

To find the mean time of the Syzygies to a given Year and Month before the Christian Era.

1. In the Table *Epochæ mediarum Conjunctionum Lunæ cum Sole* (* E e &c.) find a Year of the 18th Century, which added to the given number of Years before Christ, diminished by One, shall make a number of whole Centuries.

2. Seek this number of Centuries in the Table *Revoluciones Lunæ ad Solem in Annorum centuriis* (** E e 3), and subtract the time, and Motions answering to it, from the Time and Motions answering to the Year of the 18th Century before found, and they will give the mean Time of the first mean Conjunction in the given Year before Christ, with the Motions answering thereto. Whence the time of Conjunction or Opposition in the given Month may be found by the Precepts already delivered.

If the Year of the 18th Century be a Leap Year, the given Year before Christ was likewise a Leap Year.

Required the mean time of the Moon's Conjunction with the Sun, in the month of May, in the year before Christ 585.

1st Eq. D	+	0	0	5
3d	—	0	0	6
4th	—	0	0	37
Equ. in Syz.	—	1	8	35
Sum	—	1	9	13
⊙ Equation	—	0	0	51
		1	8	22
Hours 2 =		1	0	57
Min. 54. sec. 35.		0	7	25

E X A M P L E.

Required the Moon's true place to the mean time found in the foregoing Example.

	☉ m. Anom.	☉ Apog.	☽ me. long.	☽ Apog.	☽ ☿
	° ' " "	° ' " "	° ' " "	° ' " "	° ' " "
1716	6 12 11 41 41	3 7 54 20	7 8 59 37	8 7 35 37	6 28 17 2
2300 subtr.	11 8 41 42 40	1 8 45 33	5 15 8 35	11 23 42 30	6 27 25 50
					add.
	7 3 29 59 1	1 29 8 47	1 23 51 2	8 13 53 7	1 25 42 52
May 28 Biff.	4 26 51 16 20	25			
Hours 4	9 51 22				
Min. 3. 42 ^s .	9 5	☉ Anom. 31'	6 54 26	3 30	1 40
		15" 48"	3 31	2	1
☉ M. Anom.	0 0 31 15 48				
☉ Apog.	1 29 9 12		2 0 48 59	8 13 56 39	1 25 41 11
		3d Eq.	0 0 6	5 15 42 47	
☉ M. long.	1 29 40 28	4th	0 0 37	Ann. Arg.	☽ Apog. 8 13 56 39
☉ Eq.	1 2	Eq. in Syz.	1 8 15		☉ Apog. 1 29 9 12
☉ Long.	1 29 39 26		☽ 1 29 40 1		6 14 47 27
			☉ 1 29 39 26		Arg. 4th Eq.
		Dist. of ☽ from ☉	0 0 0 35		

Therefore the Moon being past the Conjunction by an arc of $35''$; subtract $1^m. 9^s$ from the time before found, and there remains $4^h. 2^m. 33^s$ for the correct time of Conjunction sought.

To find the Moon's Place for any given Time.

1. Find the Sun's true Longitude at the given Time. And if the given Time be apparent, convert it into Mean.

2. From the Tables, *Epochæ mediorum motuum Lunæ & Apogæi ejus* (H h 4 &c.); *Epochæ motus Nodi ascendentis Lunæ* (I i 2); *Medii motus Lunæ Apogæi & Nodorum ejus ad dies mensium* (I i 3 &c.) and, *Medii motus Lunæ, Apogæi, & Nodorum ad horas & minuta horaria*, take out the mean Places of the Moon, her Apogee and Node to the given mean Time. The mean motions of the Moon and her Apogee for months, days, and parts of a day, must be added to their radical mean Longitudes found in the Table *Epochæ mediorum motuum* &c. (H h 4); but the mean Motions of the Node must be subtracted therefrom.

3. In *Tabula Æquationum annuarum Lunæ, Apogæi & Nodorum*, (L l 3 and the following) find the Equations of the Moon, her Apogee, and Node, answering to the Sun's mean Anomaly, and add them to, or subtract them from, the respective mean Places, as the Table shall direct.

4. The Argument of the second Equation of the Moon, which is entitled *Æquatio semestris prima* (M m) is the distance of the Sun from the Moon's Apogee, and is called the Annual Argument.

5. The Argument of the third Equation entitled *Æquatio semestris altera* (ibid.) is the distance of the Sun from the Node.

6. For the Argument of the fourth Equation (ibid.) add the Place of the Sun's Apogee to the Annual Argument, and subtract their sum from the Place of the Moon thrice equated. But this being Sir Isaac Newton's sixth Equation, its argument should be corrected by the addition or subtraction of the Equation of the Moon's Center *.

7. In the second column of *Tabula Æquationis Apogæi & Excentricitatum Orbis Lunæ* (M m 2 &c.) is the second Equation of the Moon's Apogee; in the fourth, the Excentricity of her Orbit; and in the seventh, the Logarithm for finding the Equation of the Center, all answering to the Annual Argument.

8. The Moon's Apogee twice equated, subtracted from the Moon's Place four times equated, gives her Mean Anomaly; which, when less than six Signs, is the Argument of *Tabula pro expediendo calculo Æquationis centri Lunæ* (N n &c.); but when greater, that Table must be entered with its complement to 12 Signs. From this Table take the Equation answering both to this Argument and to the Logarithm found in the 7th column of the preceding Table, and thereby encrease or diminish (as the Table shall direct) half the Mean Anomaly, or of half its Complement to 12 Signs; and the log. Tangent of the Angle so obtained added to the Logarithm above-mentioned, will give the log. Tangent of half the true Anomaly, or of half its complement to 12 Signs. And the difference between the true Anomaly and the Mean is the Equation of the Center; to be subtracted when the M. Anomaly is less than six Signs, and to be added when greater.

* To correct the Argument of this Equation, subtract the Moon's Apogee once equated from the Place of the Moon, and take the remainder for the Moon's mean Anomaly. In *Tabula Æquationum Apogæi & Excentricitatis Orbis Lunæ* (M m 2 &c.) take the Logarithm in the 7th column answering to the Annual Argument, and add it to the logarithmic Tangent of half the Moon's mean Anomaly. Their sum will be the tangent of an Angle, the double of which subtracted from the Moon's M. Anomaly will give the correction of this Argument; to be subtracted from the Argument, if the Moon's Mean Anomaly be less than six Signs, but added if greater. Thus in the following example you will have

For the Moon's M. Anomaly	4° 18' 48"	its half	69° 24'	tan.	10.4249
Log. pro æquatione Centri Lunæ					9.9422
An Angle whose double is	4° 13' 32"				10.3671
Correction to be subtracted	— 5' 16"				

9. The

9. The Sun's true Longitude subtracted from the Place of the Moon, now five times equated, is the Argument of *Tabula Variationis five Reflectionis* (N n 4) which exhibits the Variation at the mean distance of the Earth from the Sun. To the logistical Logarithm of the quantity found in this Table, add the Logarithm in the Table *Logarithmi pro correctione variationis* (ibid.) answering to the Sun's mean Anomaly; their sum will be the logistical Logarithm of the true variation; which added to, or subtracted from the Moon's place five times equated, will give her true Place in her Orbit.

10. In *Tabula pro computo Latitudinis Lunæ* (O o) find the second Equation of the Node, the log. Sine of the Inclination, and the greatest Reduction; all answering to the Argument of the third Equation. The Longitude of the Node already once equated, being corrected by this Equation, as the Table shall direct, and subtracted from the true Place of the Moon in her Orbit, will give the Argument of Latitude.

To the log. Sine of the Inclination, add the log. Sine of the Argument of Latitude, their sum, deducting Radius, will be the log. Sine of the Moon's Latitude; which, when the Argument of Latitude is less than six Signs, is North; when greater, South.

To the logistical Logarithm of the greatest Reduction, add the arithmetical complement of the log. Sine of the Argument of Latitude, their sum will be the logist. Logarithm of the true Reduction; which, subtracted from the true Place of the Moon in her Orbit in the first and third Quadrant of the Argument of Latitude, or added thereto in the second and fourth Quadrant of the same, will give the Moon's Longitude in the Ecliptic.

11. In *Tabula Parallaxium Lunæ horizontalium in Syzygiis* (O o 2) find the Parallax answering both to the Moon's true Anomaly, and the Excentricity of her Orbit (found by Precept 7th); the logistical Logarithm of this Parallax, added to the Logarithm found in the Table *Logarithmi pro Parallaxi extra Syzygias* answering to the Moon's distance from the nearest Syzygy, will give the logistical Logarithm of the true horizontal Parallax of the Moon.

12. The proportion of the Moon's horizontal Parallax to her horizontal Diameter is as 60 to 33. Add therefore 2596 (the logistical Logarithm of 33) to the log. Logarithm of the true horizontal Parallax, it will give the log. Logarithm of the horizontal Diameter of the Moon.

The horizontal Diameter of the Moon is to the Moon's Diameter in Longitude, as the Cosine of the Moon's Latitude to the Radius. And the horizontal Diameter is to the Diameter in R. Ascension, as the Cosine of her Declination to the Radius.

The quantity found in the Table *Aug. Diam. Lunæ* (O o 5) answering to the Moon's Distance from the Vertex (and likewise to her Distance from her Apogee) being added to the Moon's horizontal Diameter will give her apparent Diameter; which, encreased in the respective proportions above mentioned, will give her apparent Diameters in Longitude and R. Ascension.

EXAMPLE.

In the year 1725, Dec. 5, the Western Limb of the Moon, was observed by Dr. Halley to pass the Meridian of the Observatory at *Greenwich* at 9^h. 8^m. 5^s mean time, its observed right ascension being 42°. 26'. 15", and the distance of the lower Limb from the Vertex 34°. 9'. 15".

Required the Moon's place at the same time according to the Tables.

	☉ M. Anom.	☉ Apog.	☉ true Long.	
	5 17 20 40	3 8 4 22	8 24 59 2	
	☾ M. Long.	☾ Apog.	☾ ☉	Arg. of the Equations.
1725	8 19 36 54	7 24 56 18	1 13 11 2	5 17 20 ☉ M. An.
Dec. 5.	4 26 47 52	1 7 46 2	17 57 7	Arg. of the ann. Equat.
Hour 9.	4 56 28	2 30	1 12	8 24 59 ☉ Long.
Min. 8. sec. 5.	4 26	2	1	9 2 40 ☾ Apog.
				11 22 18 38
				Annual Arg.
	1 21 25 40	9 2 44 52	0 25 12 42	
Annual Equat.	+ 2 38	— 4 28	+ 2 7	Excentr. 066429
2d Eq. + 1 0				8 24 59 ☉ Long.
3d — 0 41	1 21 28 18	9 2 40 24	0 25 14 49	0 25 15 ☾ ☉
4th — 1 41	— 1 22	— 2 41 0	+ 1 19 7	7 29 44
				Arg. 3d Equ.
	1 21 26 56	8 29 59 24	0 26 33 56	3 8 4 ☉ Apog.
Eq. of Centre	— 5 3 56	4 21 27 32	1 15 46 45	11 22 18 An Arg.
		☾ me. Anom.		3 0 22
+ Variation	1 16 23 0		0 19 12 49	1 21 28 ☾ Long.
	— 36 15	½ me. Anom.	Arg. Lat.	10 21 6
		0 1		— 5 16 Correction.
† Reduction	1 15 46 45	70 43 46		10 15 50
	— 4 11	— 1 47		Arg. 4th Equ.
☾ Long Eclip.	8 15 42 34	70 41 59 tan.	10.455683	1 16 23 ☾
* ☾ Lat. North	1 39 57	Log. for Eq. centre	9.942214	8 24 59 ☉ Long.
				4 21 24 ☾ fr. ☉
				Arg. of Variation.
		68 11 48 tan.	10.397897	
		4° 16 23 36 its double		
		— 5 3 56 Equation of Centre to be subtracted.		

† ☾ Simple variat. — 34 18 LL	2430	† Greatest Reduct. — 6 44	LL 9499	* Log. fin Incl.	8.94616
Correction from the table	9.9758	Sin. doub. Arg. Lat.	Ar. Co. 2065	Log. f. Arg. Lat.	9.51732
☾ True variation — 36 15 LL	2188	True Reduct. — 4 11	LL 11564	☾ Lat. Nor. 1 39 57	8.46348

Now

Now to find the Moon's true place from the observation.

The horizontal parallax of the Moon in the Syzygies, to the true Anomaly $4^{\circ}. 16'. 23''$, and to the excentricity 0664 is $60'. 3''$, whose logistical logarithm is — — — — —	— 3	
The logarithm for the parallax (<i>extra Syzygias</i>) to the distance of ☽ fr. ☉ $4^{\circ}. 21'. 24''$ (or $1^{\circ}. 8'. 36''$ from the Opposition) is — — — — —	24	0 1 "
Their sum is the logist. log. of the true horizontal parallax	21	= 0 59 43
To which add the constant logarithm — — — — —	2596	
And we have the logist. log. of the Moon's horiz. diam.	2617	= 0 32 50
The observed dist. of the Moon's lower limb from the vert. was		34 9 15
To which add the refraction — — — — —		+ 0 36
Gives its apparent distance from the vertex, clear of refraction		34 9 51
To the logist. log. of the horiz. parallax, found above —	21	
Add the Arith. Compl. of the sine of the distance of the Moon's limb from the vertex — — — — —	2506	
The sum will be the logist. log. of the parallax in altitude of the Moon's lower limb * — — — — —	2527	= 0 33 32
This being subtracted from the correct apparent distance of the Moon's limb from the vertex, gives its true distance from the same — — — — —		33 36 19
Subtract also the horizontal semidiameter of the Moon —		16 25
Remains the true distance of the Moon's centre from the vertex — — — — —		33 19 54
The compl. of the latitude of the Observatory added thereto		38 31 30
Gives the true dist. of the Moon's centre from the North Pole		71 51 24
To the logist. log. of the Moon's horizontal diameter —	2617	
Add the log. cosine of the Moon's declination, or log. sine of her distance from the Pole — — — — —	9778	
Their sum will be the logist. log. of the Moon's horizontal diameter in right Ascension — — — — —	2395	= 0 34 34
To the observed right Ascension of the Moon's Western limb — — — — —		42 26 15
Add the Moon's semidiameter in right Ascension — —		0 17 17
Their sum will be the true right Ascension of the Moon's centre — — — — —		42 43 32
The Moon's right Ascension $42^{\circ}. 43' 32''$, and her distance from the North Pole $71^{\circ}. 51'. 24''$ being given, her longitude in the ecliptic will be found in $\gamma 15^{\circ}. 42'. 12''$, with $1^{\circ}. 38'. 37''$ North latitude.		
Here the Longitude of the Moon, found from the Observation, is $22''$ less than the Tables give it.		

* The Parallax in altitude being as the sine of the *apparent* distance from the vertex; whenever the apparent distance is not given, the true distance may be increased by guesses, and from thence the parallax in altitude found. Or, if the true distance from the vertex be taken for the apparent, and the parallax in altitude be found from it, that true distance increased by this parallax may be taken for the apparent; and the parallax thence found will be very near the truth.

To correct the computed Places of the Moon.

The Errors of the Tables may in a great measure be corrected by help of the last column of the Tables entitled *Lunæ Meridianæ &c.* (¶ b and the following pages). For after a Period of 223 Synodical Months, the Errors will recur nearly of the same magnitude.

To find the day in these Tables which corresponds to the time for which the correction is required, if that time be after *Dec. 27, 1739*, subtract this Period or a multiple thereof, or a Period of 111 Synodical Months, (which are to be found in the Table entitled *Periodi Lunares* (* * E e 4) from the given time; but if the given time precede *Jan. 13, 1722*, add the like Periods thereto, so that the Remainder or Sum may fall on a day between *Jan. 13, 1722* and *Dec. 27, 1739*; and if there was an observation at *Greenwich* on the day so found, the last column of the Tables *Lunæ Meridianæ &c.* will exhibit the Error of the Computation. But if the day corresponding to the given Time be not found in the Tables *Lunæ Meridianæ &c.* no correction can be had but by comparing the Errors of the adjacent days, when they happen to lie near enough for that purpose to the day sought.

And observe, that when the Period of 223 Synodical Months contains no more than four Leap Years, it will consist of 18 years, 11 days, 7 hours, 43 min. and 20 sec. but whenever it contains five, it will be compleated in 18 years, 10 days, 7 hours, 43 minutes, and 20 seconds.

E X A M P L E.

To find from the Tables corrected, the Time the Moon's Eastern Limb passed the Meridian of Greenwich on Dec. 28, 1745.

In this Example, the Period of 18 years will contain five Leap Years; therefore from the given time subtract 18 years 10 days, and we shall have *Dec. 18, 1727*, for the day in the Tables *Lunæ Meridianæ &c.* which corresponds to the given time, on which day the Moon's Limb was observed to pass the Meridian at $13^h. 45^m. 21^s$ Mean Time. 18 years and 10 days want $7^h. 43^m. 20^s$ of a compleat Period, in which time the Moon's mean Motion is $4^{\circ}. 14'. 22''$; and the Meridian passes over an Arc of the Equator equal to this Arc of Mean Motion in $16^m. 55^s$ of mean Time: Subtract therefore $16^m. 55^s$ from the time of the Observation, and there will remain $13^h. 28^m. 26^s$ for the time of the passage of the Moon's Eastern Limb over the Meridian of *Greenwich*, *Dec. 28, 1745*.

The Moon's computed Longitude to this time is $\Omega. 6^{\circ}. 43'. 8''$. her Latitude $3^{\circ}. 49'. 24''$ N.

In the last column of the Table *Lunæ Meridianæ &c.* the Error on *Dec. 18, 1727*, is $- 3'. 1''$; therefore $3' 1''$ being added to the computed Longitude gives $\Omega. 6^{\circ}. 46'. 9''$ for her correct Longitude at that time.

Hence the R. Ascension of the Moon is found to be
which encreased by her true Diameter in R. Ascension
is the Right Ascension of the Eastern Limb

To the Sun's Mean Longitude at the given time
add an Arc proportional to the same mean time
their sum is the R. Ascension of the Meridian
which is past the Moon's Limb by an Arc of

This Arc the Meridian passes over in about $6\frac{1}{2}$ seconds of time,
which

130	12	38
	17	18
130	29	56
288	25	2
202	6	30
130	31	32
	0	1 36

which subtracted from the given time would give the time of the Transit sought, if the Moon by encreasing her R. Ascension after her Limb passed the Meridian, had not diminished its distance from the same. To allow for this, add 4" to the Arc of distance $0^{\circ}. 1'. 36''$, and it will become $0^{\circ}. 1'. 40''$, which the Meridian passes over in 7^s of time; therefore from the given Time $13^h. 28^m. 26^s$, subtract 7^s. the remainder $13^h. 28^m. 19^s$ will be the mean time the Eastern Limb of the Moon passed the Meridian of *Greenwich* according to the Tables corrected, which was observed by the Rev. Dr. *Bradley* at $13^h. 28^m. 21^s$.

To find the Longitudes of Places on the Earth by Observations of the Moon.

The Observations fittest for this purpose are, either the appulses of the Moon to fixt Stars; or her distance from a fixt Star lying near the Parallel of Latitude in which the Moon then is; or lastly, the distance of the Moon from the Sun in her first or last Quarter. From any of these Observations, the Latitude of the Place of Observation being given, the distance of the Meridian from that of *Greenwich* may be discovered, by finding the time reckoned at *Greenwich* when the Observation was made: for the difference between that time and the time in the unknown Meridian, will give the distance of the two Meridians from each other.

E X A M P L E.

In the year 1737, Jan. 1, 6^h. 4^m. 30^s apparent time (which converted into mean is 6^h. 13^m. 40^s) in the Latitude 65°. 50'. 50" N. an Occultation of the Star γ Tauri was observed. Required the distance of the Meridian under which the Observation was made, from that of Greenwich.

This day is not to be found in the Tables *Lunæ Meridianæ &c.* Subtract therefore the Period of 111 Synodical Months, and it will give Jan. 11, 1728, for a day corresponding to the time of the Observation. On this day the Error is found to be — 1'. 18".

The Longitude of the Star at the given time, deduced from the Britannic Catalogue was $II^{\circ}. 2'. 0''$. Its Latitude $5^{\circ}. 46'. 22''$ South.

Assume the Time at *Greenwich* by the help of any *London* Ephemeris; one of which puts down the Conjunction of the Moon with this Star at about five in the afternoon. The Moon's Longitude by the Tables to this Time is $II^{\circ}. 1'. 20''$ which corrected by the Error above mentioned will be $II^{\circ}. 2'. 38''$, with Latitude $4^{\circ}. 50'. 18''$ S.

The horizontal Parallax of the Moon at the given time is	0	'	"	0	55	41
To the mean Longitude of the Sun	—	—	—	—	292	11 24
add the mean Time of the Observation in the unknown Meridian 6 ^h . 13 ^m 40 ^s	—	—	—	—	93	25 0
their Sum is the R. Ascension of the unknown Meridian	—	—	—	—	25	36 24
The Nonageffimal degree of the Ecliptic in the Latitude 65°. 50'. 50"	—	—	—	—	8	24 56 24
The Parallactic Angle at the Moon	—	—	—	—	5	33 2
	(d)					The

The Moon's true distance from the vertex	—	—	—	55	12	54
Her apparent Semidiameter	—	—	—	0	15	28
The moon's true distance from the Vertex encreased by an assumed Paral-						
lax in Altitude	—	—	—	55	59	0
hence the true Parallax in Altitude	—	—	—	0	46	10
* The Parallax in Longitude, to be added to the true Longitude	—	—	—	0	4	28
The Parallax in Latitude, to be added to the true Latitude	—	—	—	0	45	57

Hence the apparent Place of the Moon's Center was Π 2° . $7'$. $6''$ with Latitude 5° . $36'$. $15''$ S. which being $6''$ forwarder in Longitude than the Star, and the Occultation being made by the Eastern Limb of the Moon, the Occultation must have preceded the assumed Time.

To correct the time, convert the Moon's apparent Semidiameter $15'. 28''$, and likewise the apparent difference of Latitude between the Moon and Star $10'. 7''$, into Seconds: the difference of the Squares of these quantities is $492735''$, whose Square Root $702''$ or $11'. 42''$ will be nearly equal to the apparent distance of the Moon's Center from the Star in Longitude at the instant of Occultation. To this add the $6''$ whereby the apparent Longitude of the Moon's Center was found by the calculation to precede the Star; their sum $11'. 48''$ will be nearly equal to the Arc of Longitude by which the Moon is too forward for the Occultation. By the Tables of Mean Motions, the time the Moon is passing over this Arc is found to be $21'. 30''$; which subtracted from the time first assumed, will give 4^h . 38^m . 30^s , and to this time repeat the whole computation.

The Moon's correct Longitude 1737, Jan. 1, 4^h . 38^m . 30^s is Π 1° . $51'$. $13''$, her Latitude 4° . $49'$. $59''$ S.

The R. Ascension of the unknown Meridian	—	—	—	25	35	31
The Nonagesimal Degree of the Ecliptic	—	—	—	8	24	55
The Parallactic Angle	—	—	—	5	24	32
The Parallax in Longitude, additive	—	—	—	0	4	21
The Parallax in Latitude, additive	—	—	—	0	45	57
The apparent distance of the Star from the Moon's Center in Longitude	—	—	—	0	11	26
Their apparent distance in Latitude	—	—	—	0	10	26

Convert the Moon's apparent Semidiameter $15'. 28''$, and likewise the apparent difference of Latitude $10'. 26''$ into seconds, as before; the Square Root of the difference of the Squares of these quantities $11'. 25''$, will be the apparent distance of the Star

* In applying the Parallaxes to the computed Places of the Moon, observe

1. When the Moon is to the East of the Nonagesimal Degree of the Ecliptic, the Parallax in Longitude must be added to the true Longitude, but when she is to the West thereof it must be subtracted, to obtain the apparent Longitude.

2. The like Rule holds for the Right Ascensions, according as the Moon is to the East or to the West of the Meridian of the Place of Observation.

3. The Parallax in Latitude added to the true distance of the Moon from that Pole of the Ecliptic which is nearest to the Vertex of the Place of Observation, will give her apparent distance from that Pole; whence it will appear whether it is to be added to or subtracted from the true Latitude to obtain the apparent. But between the Tropics where the Ecliptic becomes Vertical once in 24 hours, at such times it is always to be added to the true Latitude.

4. In like manner the Parallax in Declination added to the true distance of the Moon from that Pole of the Equator which is nearest to the Vertex of the Place of Observation, will give her apparent distance from that Pole, whence it will appear whether it is to be added to or subtracted from the true Declination. But in Places of the earth which have no Latitude, the Parallax in Declination is always additive.

from

from a circle of Latitude passing over the Moon's Center ; which encreased in the proportion of the Cosine of the Latitude of the Star to the Radius, will give $11'. 28 \frac{1}{2}''$ for the apparent distance in Longitude of the Star from the Center of the Moon, at the instant of Occultation. This exceeds the distance found above by $2 \frac{1}{2}''$, and the time requires a farther diminution.

The Moon's apparent Longitude to the time first assumed was $II^{\circ} 7'. 6''$; that to the corrected time $II^{\circ} 1'. 55'. 34''$ their difference $11'. 32''$ is the visible motion of the Moon in Longitude in $21^m. 30^s$, the interval between the two times. And

$$\text{As } 11'. 32'' : 2 \frac{1}{2}'' :: 21^m. 30^s : 5^s -$$

Therefore subtracting 5^s from $4^h. 38^m. 30^s$, there will remain $4^h. 38^m. 25^s$ for the mean Time at *Greenwich* when the Occultation happened under the unknown Meridian. And this time subtracted from the given mean time of the Observation leaves $1^h. 35^m. 15^s$, which converted into an Arc is $23^{\circ} 48'. 45''$ the difference of Meridians sought.

But as the Occultations of Stars are not so frequently to be observed at Sea, the distance of the Moon from a fixt Star is an Observation likely to be of more use to Mariners: For this purpose a Star should be chosen as near as may be to the Parallel of Latitude in which the Moon is at the time of Observation; by which means the computed distance of the Moon from the Star will be little affected by Errors in the Moon's computed Latitude. And if the Moon's distance from two such Stars, one preceding her Place in Longitude and the other following it, be observed, and a mean taken between the times found from each Observation, the result will on many accounts be more to be depended on than from a single Observation.

The distance of the two Meridians may commonly be known within three or four degrees of the truth from the Ships Journals, and from thence the time at *Greenwich* may be assumed for the first computation. Having found the Longitude and Latitude of the Moon to the time assumed, correct the Longitude (where it can be done) as above directed, and find the Moon's Right Ascension, and distance from that Pole of the Equator which is nearest to the Vertex of the Place. Then find her Azimuth, and true distance from the Vertex; to the latter add the difference between the Moon's Parallax in altitude and the Refraction, which will give her visible distance from the Vertex. Find the Star's Azimuth to the same time, and its distance from the Vertex, from which subtract the Refraction.

Then in a spherical Triangle are given, two sides, which are the visible distances of the Moon and Star from the Vertex, and the Angle between them, *viz.* the azimuthal distance of the Moon's Center from the Star, to find the third side; which is the visible distance of the Moon's Center from the Star: And this side diminished or encreased by the Moon's apparent Semidiameter, according as the nearer Limb to the Star or the more remote one was observed, will be equal to the observed distance of the Moon's Limb from the Star, in case the time at *Greenwich* was rightly assumed: but if not, correct the time by guess, and repeat the computation; and by comparing the Errors, the time at *Greenwich* may be obtained to a sufficient exactness, and thence the distance between the two Meridians.

E X A M P L E.

In the year 1725, Dec. 10, $11^h. 14^m$ of apparent time (which is $11^h. 13^m$ mean Time) at a Place to the West of Greenwich, in the Latitude of 40° N. the Star γ Leonis was observed $20^{\circ}. 50'$ distant from the nearer Limb of the Moon. Required the distance of the unknown Meridian from that of Greenwich.

Assume $13^h. 21^m$ for the mean time at *Greenwich* when the Observation was taken.

The

The Moon's computed Longitude at this time was	—	—	—	—	Ω	4	4	2	
The Error of the Tables	—	—	—	—			+	48	
The Moon's correct Longitude	—	—	—	—					Ω
her Latitude, North	—	—	—	—		4	4	50	
her horizontal Parallax	—	—	—	—		4	59	47	
The Right Ascension of the Moon	—	—	—	—		1	0	18	
her distance from the North Pole	—	—	—	—		127	42	28	
The Right Ascension of the unknown Meridian	(11 ^h . 13 ^m . 27 ^s 31 8)					65	52	43	
The Moon's Azimuth	—	—	—	—		78	46	8	
her distance from the Vertex	—	—	—	—		84	0	10	
the true Parallax in altitude	—	—	—	—		43	47	7	
The Refraction	—	—	—	—		+	42	16	
The Moon's visible distance from the Vertex	—	—	—	—		—	0	53	
Her apparent Semidiameter	—	—	—	—					44 28 30
The Longitude of the Star γ Leonis	—	—	—	—					0 16 47
Its Latitude, North	—	—	—	—		Ω	25	45	0
The Right Ascension of the Star	—	—	—	—			8	47	27
Its distance from the North Pole	—	—	—	—			151	11	32
Its Azimuth	—	—	—	—			68	47	21
The Stars true distance from the Vertex	—	—	—	—			96	10	40
The Refraction	—	—	—	—		63	22	13	
The Stars apparent distance from the Vertex	—	—	—	—		—	1	46	
The azimuthal angle between the Star and the Moon's Center	—	—	—	—					63 20 27
The visible distance of the Moon's Center from the Star	—	—	—	—					12 10 30
Subtract the Moon's apparent Semidiameter	—	—	—	—					21 13 13
remains the visible distance of the Moon's Limb from the Star	—	—	—	—					0 16 47
which exceeds the observed distance by 6'. 26". therefore the assumed time requires a correction.									20 56 26

Add 15^m to the assumed time (for the Moon was moving toward the Star), and the correct Longitude of the Moon to 13^h. 36^m of the same day, will be found Ω 4°. 14'. 10", with North Latitude 4°. 59'. 40"; and having again found the Visible Distances of the Moon and Star from the Vertex, with the Angle comprehended between them, we shall thence find the distance of the Moon's Limb from the Star 20°. 47'. 17", which is deficient of the observed distance by 2'. 43". Therefore the Moon's Limb approaches the Star by an Arc of 9'. 9" in 15 minutes of time. And

$$\text{As } 9'. 9'' : 6'. 26'' :: 15^m : 10^m. 33^s.$$

Add therefore 10^m. 33^s, to 13^h. 21^m, and it will give the time at *Greenwich* 13^h. 31^m. 33^s, and the difference of the times 2^h. 18^m. 33^s. Hence the distance between the two Meridians is 34°. 38'. 15".

In this Example the difference between the distances of the Moon and Star from the Vertex is so great, that the difference of Refraction is very considerable, and therefore the visible distance of the Moon from the Star could not be accurately determined without finding both those distances from the Vertex. But where the Altitudes of the Moon and Star are not very unequal *,

* See the Philosophical Transaction, N° 368, page 109.

the Refraction may at once be allowed for in the observed distance by adding as many seconds thereto, as that consists of degrees; and the work will be abbreviated, by computing the apparent distance of the Moon from the Star, by means of the Parallaxes in Longitude and Latitude.

E X A M P L E.

In the year 1725, Dec. 10, 12^h. 50^m mean time, at a Place to the West of Greenwich in the Latitude of 48° North, the Star β Tauri was observed 47°. 57'. 12" distant from the farther Limb of the Moon. Required the distance of the unknown Meridian from that of Greenwich.

To correct the observed Arc for the Refractions add 48" thereto, it will become 47°. 58'. 0". Assume 56° for the distance of the unknown Meridian from Greenwich, which will give 16^h. 34^m for the time to be assumed.

The Moon's Longitude computed to this Time is	-	Ω	6	4	0
The Error of the Tables	-	-	-	-	+ 0 48
The Moon's correct Longitude	-	-	-	-	Ω 6 4 48
Her Latitude North	-	-	-	-	4 58 6
The horizontal Parallax of the Moon	-	-	-	-	1 0 12
The Right Ascension of the unknown Meridian	-	-	-	-	103 9 3
The Nonageffimal Degree of the Ecliptic	-	-	-	-	♌ 9 40 0
The Moon's Parallax in Longitude, additive	-	-	-	-	0 24 38
Her Parallax in Latitude, subtractive	-	-	-	-	0 21 23
The apparent Longitude of the Moon	-	-	-	-	Ω 6 29 26
Her apparent Latitude, North	-	-	-	-	4 36 43
The Longitude of the Star β Tauri	-	-	-	-	II 18 43 50
Its Latitude, North	-	-	-	-	5 21 34

Here then are given in a Spherical Triangle, two Sides, one the apparent distance of the Moon from the North Pole of the Ecliptic 85°. 23'. 17", the other the distance of the Star from the same 84°. 38'. 26". with the Angle between them 47°. 45'. 36", which is the difference of the Longitudes of the Moon and Star, to find the third side

To which add the apparent Semidiameter of the Moon

it will give the apparent distance of the farther Limb of the Moon from

the Star at the time assumed

The observed distance corrected of Refraction was

Add 15^m to the assumed time for a correction, and it will give 16^h. 49^m.

To this time the correct Longitude of the Moon is Ω 6°. 14'. 7", her Latitude 4°. 57'. 58"

North. Find the Parallaxes in Longitude and Latitude over again, and the resolution of

the Spherical Triangle will give 47°. 43'. 51" for the apparent distance of the Moon's

Center from the Star; which encreased by the apparent Semidiameter of the Moon

becomes 48°. 0'. 39", exceeding the observed distance of the Moon's Limb from the

Star by 2'. 39". And this Error added to the former — 6'. 47", will give 9'. 26" for

the Moon's apparent motion from the Star in 15^m of time. And

$$\text{As } 9'. 26'' : 6'. 47'' :: 15^m. : 10^m. 42^s.$$

(e)

Therefore.

Therefore add $10^m. 42^s$ to $16^h. 34^m$ the Time first assumed, it will give $16^h. 44^m. 42^s$ for the Time at *Greenwich* when the Observation was taken under the unknown Meridian. And the difference of the Times $3^h. 54^m. 42^s$ gives the distance between the two Meridians $58^\circ. 40'. 30''$.

By a like method of Computation may the difference of Meridians be found from Observations of the Moon's distance from the Sun in her first and last Quarter. And the work will be somewhat more simple as the Sun has no Latitude. But in this case the computed distance must be corrected by the Semidiameter of the Sun as well as by that of the Moon. And the Sun's Diameter is to be found in *Tabula Motuum horariorum, Diametrorum &c.* (O o 5) answering to his Mean Anomaly.

PRECEPTS FOR COMPUTING THE PLACES OF THE PLANETS.

To find the Place of a Superior or of an Inferior Planet for any given Time.

1. Find the Sun's true Longitude for the given Time, and if the given Time be apparent convert it into mean. From the Table, *Logarithmi Distantiarum Solis a Terrâ* (E e 4) take out the Logarithm answering to the Sun's Mean Anomaly.
2. From the Tables entitled *Epochæ mediorum motuum*, and those entitled *Medii motus*, collect the Mean Places of the Planet, of its Aphelion and of its Node to the given mean Time.
3. The Place of the Aphelion subtracted from the Mean Place of the Planet will give its Mean Anomaly; to which find the Equation of the Center in the Table entitled *Tabula Æquationum*. Add or subtract this as the Table shall direct, to or from the mean Place of the Planet, it will give the Planets true heliocentric Place in its Orbit.
4. From the Planets heliocentric Place in its Orbit, subtract the Longitude of the Node, the Remainder is called the Argument of Latitude; with which enter the Table entitled *Tabula Latitudinaria*, and take out the Inclination of that point of the Planets Orbit, the Reduction, and the Logarithm of Curtation, answering thereto. The Reduction added to the heliocentric Place of the Planet in its Orbit, or subtracted therefrom, as the Table shall direct, will give the Planets true Longitude in the Ecliptic.
5. From the Table *Logarithmi distantiarum* ——— *a Sole*, take the Logarithm answering to the Planets Mean Anomaly, from which subtract the Logarithm of Curtation, the remainder will be the Logarithm of the Curtate distance of the Planet from the Sun.
6. The heliocentric Longitude of a superior Planet subtracted from the Longitude of the Sun, or the Sun's Longitude subtracted from the heliocentric Longitude of an Inferior Planet, is called the Angle of Commutation.
7. To the difference of the Logarithms of the distance of the Sun from the Earth, and of the Curtate Distance of the Planet from the Sun, add the Logarithmic Tangent of 45° , their Sum will be the Logarithmic Tangent of an Angle exceeding 45° . To the Logarithmic Tangent of the Excess of this Angle above 45° , add the Logarithmic Tangent of half the Angle of Commutation, their sum (subtracting Radius) will be the Log. Tangent of an Angle, which, added to half the Angle of Commutation of a Superior Planet, or subtracted from half the Angle of Commutation of an Inferior Planet,

Planet, will give the Elongation of that Planet. But when half the Angle of Commutation exceeds three Signs, its Complement to fix Signs must be encreased or diminished by the Angle above found to give the Elongation.

8. If the Angle of Commutation be less than six Signs, the Elongation of a Superior Planet subtracted from the Sun's Longitude, or the Elongation of an Inferior Planet added thereto, will give the Planet's true Geocentric Longitude. But if the Angle of Commutation exceed six Signs, the contrary must be observed in either case.

9. The Tangent of the Inclination, is to the Tangent of the Planets geocentric Latitude, as the Sine of the Angle of Commutation, to the Sine of the Angle of Elongation.

EXAMPLE I.

Required, the Geocentric Place of the Planet Venus, June 13, 1^h. 17^m, mean time in the year 1690.

	☉ Me. Anom.	☉ Apog.	♀ Me. long.	♀ Aphel.	♀ Node	Inclin. N.
1690	6 12 55 43	3 7 28 3	7 22 26 18	10 6 22 5	2 13 52 43	0 58 42
June 13	5 11 38 19	0 27	8 22 45 20	25	14	
Hour 1	2 28		4 0			
Min. 17	42	3 7 28 30	1 8	10 6 22 30	2 13 52 57	
Sec. 30	1		2	6 8 54 18	2 1 31 20	
				♀ Me. Anom.	Arg. lat.	
☉ M. Anom.	11 24 37 13		4 15 16 48			
Apog.	3 7 28 30	Prosth.	+ 7 29	Log. dist. Earth fr. Sun	5,007256	
				Log. dist. ♀ fr. Sun	4,855745	
Prosth.	3 2 5 43	Reduction	4 15 24 17	Tang. 54 47 51	10,151511	
	+ 10 41		- 2 31	-45 00 00		
☉ Long.	3 2 16 24	♀ Helioc.	4 15 21 46	Tang. 9 47 51	9,237255	
♀ Elong.	+ 17 38 40	☉ Subtr.	3 2 16 24	Tang. 21 32 41	9,596391	
				Tang. 3 54 1	8,833646	
♀ Geo. Long.	3 19 55 4	Commut.	1 13 5 22			
♀ Lat. Nor.	1 19 21	Half	21° 22 41			
				17 38 40 ♀ Elongation.		
				Commut. 43 5 22	Ar. Co. 0,16549	
				Elong. 17 38 40	Sin. 9,48160	
				Inclinat. 2 58 42	tang. 8,71624	
				♀ Lat. 1 19 21	N.tang. 8,36333	

EXAMPLE II.

*Required, the Geocentric Place of the Planet Jupiter, Dec. 3, 6^h. 30^m.
mean time, in the year 1690.*

	☉ M. Anom.	☉ Apog.	☿ M. long.	☿ Aphel.	☿ Node	Inclin. South
1690	6 12 55 43	3 7 28 3	11 13 7 16	6 9 21 48	3 7 25 50	1 18 58
Dec. 3	11 2 8 51	0 56	28 0 58	1 6	46	
Hour 6	14 47		1 15			
Min. 30	1 14	3 7 28 59	6	6 9 22 54	3 7 26 36	
				6 1 46 41	9 3 53 56	
☉ M. Anom.	5 15 20 35		0 11 9 35	☿ M. Anom.	Arg. Latit.	
☉ Apog.	+ 3 7 28 59	☿ Prosth.	+ 10 57			
	8 22 49 34		0 11 20 32	Log. dist. ☿ fr. ☉		5,694521
Prosth.	- 30 2	Reduction	+ 0 4	Log. dist. ☉ fr. ☉		4,992841
☉ Long.	8 22 19 32	☿ H. long. sub.	0 11 20 36	Tang. 78° 45' 31"		10,701680
☿ Elong.	+ 3 7 39 26	From long. ☉	8 22 19 32	- 45		
☿ Geo. Long.	11 29 58 58	Commut.	8 10 58 56	33 45 31	tang.	9,825034
Lat. South	1 22 47	Half	4 5 29 28	54 30 32	tang.	10,146874
		Its comp. to 6 fig.	54 30 32	43 8 54	tang.	9,971908
				97 39 26	☿ Elongation	
				Commut. 70 58 56	Ar. Co.	0,02437
				Elongat. 97 39 26	fin.	9,99611
				Inclin. 1 18 58	tang.	8,36125
				Latit. ☿ 1 22 47 S.	tang.	8,38173

The Column entitled *Æquatio Secularis*, in the Table *Medii motus Jovis ab Æquinoctio in annorum centuriis* (B b b), contains Equations to be added to the mean heliocentric Longitude of *Jupiter* for every hundredth year preceding or following any Radical Year in the Table entitled *Epochæ mediorum motuum Jovis*. And the Column with the same Title in the Table *Medii motus Saturni in annorum centuriis* (D d d 4), contains Equations to be subtracted from the mean heliocentric Longitude of *Saturn* for every hundredth year preceding or following any Radical Year in the Table intitled *Epochæ mediorum motuum Saturni*.

PRECEPTS FOR COMPUTING THE PLACES OF JUPITER'S SATELLITES.

To find the apparent Distances of the Satellites from the Center of Jupiter, as seen from the Earth at a given time.

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter*, to the given time.

2. From the Table *Epochæ mediorum motuum Satellitum Jovis* (A a a a 3 and the following) and the Tables entitled *Medii motus &c.* for months, days, and parts of a day, collect the mean Motions to the given time; and likewise the mean Motion of the Apis of the fourth Satellite, which, subtracted from the mean Longitude of that Satellite, will give its Mean Anomaly. In *Tabula Æquationum Veneris* (U u 2) seek the Equation answering to this Mean Anomaly; and add it to, or subtract it from the Mean Longitude of the fourth Satellite (as the Table shall direct), it will give the true Longitude thereof. The Mean Places of the other three Satellites require no Equation of the Center.

3. From the Place of each Satellite subtract the geocentric Longitude of *Jupiter*, and in the Table *Distantiæ apparentes Satellitum à centro Jovis &c.* (G g g g) find the numbers answering to the distance of each from the geocentric place of that Planet, which are apparent distances of each from the Center of *Jupiter* in Semidiameters and hundredth parts of a Semidiameter of that Planet. And when the Argument of this Table is less than six Signs, the Satellite will be seen to the East of *Jupiter*, when greater, to the West; as is expressed at the top and bottom of the Table.

These apparent distances of the Satellites from the Center of *Jupiter*, need no correction when that Planet is in its Perihelion, and at the same time in opposition to the Sun; for the Tables are constructed to the nearest distance of *Jupiter* from the Earth: But at all other times the Satellites will appear to come later to the places found from the Tables, than the time to which they were computed, on account of the progressive motion of Light. The given time therefore must be corrected by means of the Tables *Æquationes Luminis addendæ*, and *Æquationum Luminis Correctiones* (F f f f 4).

4. From the Sun's Longitude, subtract the heliocentric Longitude of *Jupiter*, and in the Table *Æquationes Luminis* find the Equation answering to this Remainder, to which add the Equation from the Table *Æquationum Luminis Correctiones* found by the heliocentric Longitude of *Jupiter*; their Sum, added to the Time for which the computation was made, will give the true time when the Satellites shall appear in the Places before found.

5. Therefore to obtain the Situations of the Satellites to a given time, subtract the Equations of Light from the time given, and compute to the time so corrected.

EXAMPLE.

Required, the apparent Distances of the Satellites from the Center of Jupiter, and their Situations on the mean Noon of Nov. 8, 1719.

	M. Mot. 1 Sat.	M. M. 2d Sat.	M. Mot. 3d Sat.	M. M. 4th Sat.	Apf. 4th		
1719	8 2 18 20	3 18 14 0	10 10 51 58	0 26 38 4	11 9 12	☉	7 26 37 23
Nov. 8	4 8 33 43	10 8 56 9	7 9 5 57	8 10 11 12	31	24 H	5 21 26 56
	0 10 52 3	1 27 10 9	5 19 57 55	9 6 49 16	11 9 43	24 G	6 0 8 11
24 Geoc.	6 0 8 11	6 0 8 11	6 0 8 11	+ 42 33	9 27 6	☉ fr. 24 H	2 5 11
	6 10 43 52	7 27 1 58	11 19 49 44	9 7 31 49			
				6 0 8 11			
				3 7 23 38		Eq. of Light	m s 10 28
						Correction	3 25
							13 53
	1, 1 West	7, 89 West	2, 64 West	26, 17 East.			

These are the apparent distances of the Satellites from the Center of *Jupiter* and their Situations 13^m. 53^s after the mean Noon of *Nov. 8*. Therefore to obtain them to the given time, the computation should be made to 13^m. 53^s before the mean Noon, that is to 23^h. 46^m. 7^s mean time of the preceding day. But as the chief end of this calculation is to distinguish the Satellites one from another, for which purpose the difference of a quarter of an hour is commonly of small importance, the Equations of Light may here be neglected.

To find the time of the Eclipse of any one of *Jupiter's Satellites*, which shall happen next after a given Time.

1. Find the Sun's true Longitude, and the heliocentric and geocentric Longitudes of *Jupiter* to the given Time.
2. From the Table *Epochæ medicorum motuum* (A a a a 3) and the Tables for Months and Hours &c. collect the mean Place of the Satellite for the given time. And if an Eclipse of the fourth Satellite is sought, correct its mean Longitude by the Equation of the Center as above directed.
3. From the heliocentric place of *Jupiter* in his Orbit, subtract the Place of the Nodes of the Satellites (which, in the year 1717, was found to be ☿ 11°. 30') the remainder will be the Argument of Latitude; and in *Tabula Latitudinaria Satellitum Jovis* (G g g g 2) find the Reduction answering to this Argument, which, added to, or subtracted from the heliocentric place of *Jupiter*, according as the Table shall direct, will reduce the same to the Orbit of the Satellite.
4. From the Place of *Jupiter* reduced to the Orbit of the Satellite, subtract the mean Place of the Satellite, and in *Tabula temporis medio primi Satellitis a Jove motui congruentis* (E e e e 4) (if the Eclipse of the first Satellite be required) or, in *Tabula temporis mediis Satellitum secundi, tertii & quarti motibus a Jove congruentis* (F f f f) (if the Eclipse of one of the other three be sought) find the time answering to this remainder, which, added to the time given, will give the mean time of the Middle of the Eclipse, which, if it happen within a day of the given time, may be taken as correct; but if it exceed a day, the computation must be made over again to an hour or two before the time so found.

5. To the time of the Middle of the Eclipse found as above, add the Equations of Light.

6. In the Tables *Semidurationes Eclipsium Satellitum Jovis* (F f f f 2 &c.) find the Semiduration of the Eclipse of the Satellite, answering to the distance of *Jupiter* from the Node, which, subtracted from the time of the Middle of the Eclipse, will give the Immersion of the Satellite into the Shadow of *Jupiter*, and added to the same will give its Emerfion out of the Shadow.

E X A M P L E.

Required the mean time of the Eclipse of the first Satellite of Jupiter which shall happen next after the mean Noon of Nov. 8. 1719.

The Sun's true Longitude at the given time	- - - - -	^s 7 26 37 23
The heliocentric Place of <i>Jupiter</i> in his Orbit	- - - - -	5 21 25 56
The Place of the Node of the Satellites, subtract	- - - - -	10 11 30 0
The Argument of Latitude	- - - - -	7 9 55 56
The Reduction to be subtracted from the Place of <i>Jupiter</i>	- - -	- 1 59
The Place of <i>Jupiter</i> reduced to the Orbit of the Satellite	- - -	5 21 23 57
from which subtract the Place of the Satellite	- - -	0 10 52 3
there remains the distance of the point of Conjunction from the Satellite		5 10 31 54
The time answering to this Arc in <i>Tabula temporis medio</i> &c. is	- -	^h 18 ^m 56 ^s 29
Add the Equation of Light with its correction	- - -	+ 13 53
Their Sum will be the mean time of apparent Conjunction Nov. 8	-	19 10 22
Subtract and add the Semiduration of the Eclipse	- - -	- 1 6 41
		Immersion 18 3 41
		Emerfion 20 17 3

It is to be observed, that the Emerfions of the first Satellite are not visible from the time of the Conjunction of *Jupiter* with the Sun to the time of his Opposition; neither are the Immersions thereof visible from the time of *Jupiter's* Opposition to the Sun to the time of his Conjunction.

The like holds with regard to the second Satellite, except that when *Jupiter's* heliocentric Place is near the Middle of *Taurus* or of *Scorpio* both the Immersions and Emerfions are sometimes to be seen.

When the Sun's distance from the heliocentric Place of *Jupiter* exceeds an Angle of 45 degrees, both the Immersions and Emerfions of the third Satellite are visible.

In the fourth Satellite both these phaenomena are visible when the Sun's distance from the heliocentric Place of *Jupiter* exceeds an Angle of 24 degrees. But when *Jupiter* is not within the distance of 52 degrees of either of the Nodes, there can be no Eclipse of this Satellite.

R E M A R K.

THE curious lover of Astronomy, has therefore in these series of oppositions of the Sun and superior Planets, as it were a synopsis of their motions for sixty successive years, according to the order of time in which they were seen in the Heavens, compiled with no less strictness than diligence, from the most accurate Observations we could procure. You see also our Tables are made to undergo an examination rigid enough: And yet be not surprized that in *Jupiter* the error sometimes arises to eight minutes, and sometimes in *Saturn* to ten: For indeed it cannot be otherwise without assuming new hypotheses not yet sufficiently known and proved by the Touch-stone of the Heavens. *Jupiter* indeed in his motion from the opposition in the year 1677 to that of the year 1689, according to undoubted Observations, was found slower by twelve whole minutes than he was in the preceding or subsequent Revolution. Also *Saturn's* Period, between the years 1668 and 1698, was shorter than his mean Revolution by almost a whole week; and another Period of his completed between the years 1689 and 1719, was longer than the mean Revolution by about as many days; so that their difference in duration was above thirteen days. But whether this will be so for the time to come must be left to the Observation of Posterity.

It is more than probable that this is owing to the mutual actions of the greater Planets upon one another, disturbing the centripetal forces of the Sun: For what happened in the year 1683 seemed no slight argument to prove this; for then there was a conjunction of *Jupiter* and *Saturn* in those parts of their Orbits, where, on account of the situation of the Apses, the Planets approached very near to each other; their joint forces then urged *Saturn* towards the Sun, and on the contrary *Jupiter* from the Sun; wherefore *Jupiter*, having his proper velocity increased, and the centripetal force of the Sun being decreased, must have run out into a greater Orbit, and would require a longer time for a Revolution: While *Saturn*, at the same time, having his proper velocity diminished, and being urged with a greater force towards the Sun, must have been forced into a less Orbit, and so revolve in a less time. If the same happen again and again, when *Jupiter* and *Saturn* are in conjunction in *Leo*, we may justly hope that the errors we find in their motions, as they are owing only to the joint efficacy of three Centers, at length may be removed by the *Newtonian Geometry*. But if not, or if the Periods should prove longer where they are now the shortest, or the contrary, there must be some extrinsic cause, of which we are now ignorant. But more of this elsewhere.

The Reverend Mr. James Bradley's Observations on his Tables of Jupiter's Satellites.

IN these Tables we have determined the mean Motions of the Satellites, by comparing such of the oldest Observations we could procure, as seemed to be the most accurate, with our own lately taken at Wansted; when *Jupiter*, after four Revolutions, was nearly in the same place in his Orbit. But comparing in like manner the Observations at the distances of one, two, and three Revolutions of *Jupiter*, we have sometimes found very remarkable differences in the motions of the three inferior Satellites, especially in that of the second, or next but one to *Jupiter*.

It is not yet certain, whether these inequalities do not in part arise from the Excentricities of their Orbits, and the motion of their Apfides; but by what we can collect from the motions of the second Satellite, it is probable they may be occasioned by the mutual action of the Satellites on each other: For sometimes the motion of this Satellite does in so short a time vary so considerably from its mean, that a small Excentricity will not account for it; while on the other hand, the rest of the Observations will not allow a great one. As far as we can hitherto find, the Period of these Errors nearly answers to the time the three inferior Satellites take in returning to the same situation with respect to each other and to the Axis of the Shadow of *Jupiter*, which is 437 days, or after 123 Revolutions of the second Satellite. After this Period, the like Errors return, nearly in the same order: But in the intermediate time, that is, after 60 Revolutions, this Satellite will deviate 10^m , 20^m , 30^m , and even sometimes 40 minutes of time from its rate of motion during the seven preceding, or the seven following months. Now because the Satellites are not found in the same place in the heavens after the aforesaid Period is compleated, it is possible these Errors may vary somewhat on that account. And if the Orbit of this Satellite be likewise excentric, as the late Observations seem to make it, the inequalities arising from both causes must be very intricate, and not easily to be separated by Observation alone.

The Errors of the first and third Satellite are not so great, but seem to arise from the same causes; for they do not depend wholly on the Excentricity. We have also remarked a sensible difference between the durations of the Eclipses of the first, made at the different Nodes, which were alternately longer and shorter: that is to say the durations of the Eclipses at the descending Node in *Leo*, in the years 168 $\frac{2}{3}$, 169 $\frac{4}{5}$, and 1718, were at least $2^h. 20^m$; whereas at the ascending Node in *Aquarius*, in the years 1677, 1689, they did not exceed $2^h. 14^m$; as it plainly appeared by comparing many Observations of such Immersions and Emerfions as were as near together as could be got. And it is manifest this difference did not arise wholly from the Excentricity of the Orbit, if it have any; but to what cause it is owing

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we are hitherto ignorant. In the mean while, till we can get more light in this matter from future Observations, it were to be wished that some Geometer, in imitation of the great *Newton*, would apply himself to the investigating these irregularities, from the certain and demonstrative principles of Gravity.

From the Observations we have of the fourth Satellite, it is certain that its Orbit is elliptical: and all our late Observations are truly represented by supposing its greatest Equation equal to that of the Planet *Venus*, or $48'$; and that its higher Apfis was in $\text{H } 8^{\circ}. 00'$. at the beginning of the year 1717. On comparing this hypothesis with the older Observations of the years 1671, 1676, and 1677, the Computations were found to differ greatly from the Observations. But putting back the Apfis to $\text{W } 14^{\circ}. 00'$ at the beginning of the year 1677, those differences almost all vanished. Allowing it therefore an equable motion of 6° forward in 10 years, the hypothesis was found to agree with the intermediate Observations, for which reason we have followed it in our Tables. And we find our Numbers every where to agree with the Heavens (except only two Observations, both justly to be suspected) within the sixth part of a degree.

Our Table of the Equation of Light is made on a supposition that the Rays pass equably over a space equal to the diameter of the Earth's Orbit in 14 minutes of time, and it answers to all distances of *Jupiter* from the Earth when *Jupiter* is nearest to the Sun. But as the distance of this Planet from the Sun, when in its Aphelion, is greater than its nearest distance by one fourth of the diameter of the Earth's Orbit, we found it necessary to add another Table for the correction of these Equations.

As to the Latitudes of the Satellites, it is certain from the late Observations, that the Nodes of the fourth are at this time in $11\frac{1}{2}$ degrees of *Aquarius* and *Leo*; and that those of the third lie very near them. We have therefore assigned the same places to those of the two inferior Satellites, not having yet found any thing from our Observations to the contrary. And if the Nodes of the Satellites were forty years ago in the 15th degree of *Aquarius* and *Leo*, where *Cassini* places them, (whose authority in this matter is of the greatest weight), they will appear to have gone back about one degree in each Revolution of *Jupiter*. We have retained *Cassini*'s Inclination of the Orbits of the three inferior Satellites to the Plane of the Orbit of *Jupiter*, $2^{\circ}. 55'$; but we find the Inclination of the Orbit of the fourth to be somewhat less, that is to say $2^{\circ}. 42'$. It is certainly a very difficult matter to determine accurately the situation of Circles so extremely small, nor is it to be undertaken without exquisite Telescopes.

The Reverend Mr. *Pound* was pleased to add, by way of Appendix, the following Tables of his own, for computing the Eclipses of the first Satellite by addition only, after the manner of Mr. *Cassini*'s elaborate Tables, but much more compendiously.

Here follow Mr. *Pound*'s Tables of the first Satellite. H h h h.

Of the Construction of these Tables.

THESE Tables constructed from the preceding, and recommending themselves by the easiness and simplicity of the computation they afford, are designed for finding the Longitudes of places on the Earth; for by these alone, without the help of any other Tables, the Eclipses of the first Satellite of *Jupiter* may be presently found by addition only, so that the time and trouble of a laborious calculation need not deter such as are not accustomed thereto, from these studies.

That the Reader may the better comprehend what these numbers are, he is to take notice that the Epochs of the Conjunctions are the mean times of the first Conjunction of the Satellite with the mean Place of *Jupiter* in the current Julian Year, after subtracting $39^m. 8^s.$ therefrom, for the time the Satellite is passing over an Arc of $5^{\circ}. 31'. 36''$, equal to the greatest Equation of *Jupiter*.

Number A is every where the mean Anomaly of *Jupiter* in thousandth parts of a Circle, each equal to $21'. 36''$. Num. B is the distance of the mean Place of *Jupiter* from the true place of the Earth, at the radical Time, in thousandth parts of a Circle, diminished likewise by $15\frac{1}{3}$ of those parts for the greatest Equation of *Jupiter*.

Hence, the greatest Equations being subtracted from the Epochs, the others become every where additive: Thus the Equation of the Conjunctions is the sum or difference of $39'. 8''$, and of the time in which the Equation of *Jupiter* answering to the mean Anomaly A is passed over by the Satellite's mean Motion from *Jupiter*; hence it becomes 0 at Num. A 260, but at Num. A 740 is double the greatest, or $1^h. 18^m. 16^s.$ In like manner the Equation to Num. B is the sum or difference of $15\frac{1}{3}$ parts, and the same Equation of *Jupiter* in thousandth parts of a Circle, applied contrarywise, and therefore becomes double, or 31, when Num. A is 260, and 0 when Num. A is 740. In the Table of Months Num. B encreases unequally on account of the inequality of the Sun's motion; therefore if to the collective Num. B its Equation be added, their Sum (or Num. B equated) will be the Angle of Commutation, or the distance of the Sun from the heliocentric place of *Jupiter*; and this is the Argument of the second Equation, which is the Equation for the progressive motion of Light. The third Equation answers to Num. A, and is no other than the correction of the Equation of Light, and is likewise additive.

By this artifice, not only all the Equations become additive, but as both the Numbers A & B are of a decimal denomination, they are easily collected without any danger of mistakes.

In Leap Years, after *February*, subtract one day from the Times of Conjunction found by the Tables.

Of the Tables of Saturn's Satellites.

THESE Tables of the motions of *Saturn's* Satellites are no other than *Cassini's*, reduced to the Meridian of *London* and to the Julian Stile, which that most excellent Astronomer first published in the year 1716, in the Memoirs of the Royal Academy at *Paris*, and which we justly prefer to our own in the Philosophical Transf. N^o 356, as they were drawn up in haste. These Tables indeed are abundantly sufficient to distinguish the Satellites among themselves, and to find their places in respect to *Saturn*, which, because of their smallness, would be hard to find by an indifferent eye; if it did not rightly know where to look for them: However it is evident they were not finished by the renowned Author, but rather were presented to the Public, that Astronomers by their means might conveniently know beforehand those opportunities of making their Observations, which might very much conduce towards perfecting the theory of their motions.

Now the Periods of these Satellites, in which they revolve to the Equinox or beginning of *Aries*, are supposed to be these, viz.

	d	h	m	s		d	h	m	s
Of the first or inmost	1	21	18	27	Of the second	2	17	41	22
Of the third or middle	4	12	25	12	Of the fourth (the Huygenian)	15	22	41	12
Of the fifth or outmost	79	7	47	0					

Now supposing (according to the general Rule of Nature, at least in this our System, which obtains as well in the motions of the Satellites of *Jupiter* and the Moon, as in the motions of the primary Planets about the Sun) that the forces tending to the Center of *Saturn* are reciprocally in the duplicate Ratio of the distances, and therefore that the Cubes of their distances from his Center are as the Squares of the periodic Times; from the distance and period of the fourth, the distances of the rest are deduced.

But by late Observations with the long Telescope of the Royal Society, which is above 120 feet, with the assistance of a most curious Micrometer, Mr. *Pound* found the Ratio of the distance of the fourth and greatest Satellite from the Center of *Saturn*, to be to the Semidiameter of his Ring as 374 to 43, or as 8,7 to 1 nearly; also the Ratio of the Diameter of the Ring to that of *Saturn* itself to be as 7 to 3. Therefore by computation the distances will come out as follows.

	Radius of the Ring.	Radius of Saturn.		Radius of the Ring.	Radius of Saturn.
The first	2,097	4,893			
The second	2,686	6,268		The fourth	8,698
The third	3,752	8,754		The fifth	25,348
					59,154

And in this year 1719, on the 29th day of *May* Old Stile, at 10^h, Mr. *Pound* observing with the same Instruments, the fourth Satellite was seen in its greatest easterly digression, to be distant from the Center of *Saturn*, who was then in 7°. 41' of $\mathbb{M}$, three minutes and seven seconds. Whence, by a just computation, the Ratio of this distance of the Satellite from *Saturn* is to the distance of the Sun from the Earth, as 8,25 to 1000; from which the distance of the rest may be estimated.

Now

Now *Cassini* supposes the four inferior Satellites to move in the plane of the Ring, or that their Orbits are inclined to the plane of *Saturn's* Orbit in an Angle of thirty degrees: For when *Saturn* is about the middle of *Gemini* and *Sagittarius*, then the greater Axis of the Ring, which is then of the greatest width, is found to be nearly double to the lesser Axis; and these Satellites seem to describe Ellipses always similar to that of the Ring; so that in their greatest digressions from the Planet they are found in the greater Axis of the Ring produced: Which things could not happen, unless the Orbits of the Satellites had almost the same situation with the plane of the Annulus or Ring.

But lately the famous Astronomer *Miraldus*, with the best of Telescopes, and eyes more than Lyncean, has sought for the Nodes of the Ring; as may be seen in the *Mem. Roy. Acad. of Paris* for the years 1715 and 1716. For he demonstrates from very subtil Observations, that the plane of the Ring in the year 1715, intersected the plane of *Saturn's* Orbit at the $19^{\circ} 45'$ of *Virgo* & *Pisces*; and granting the Angle of Inclination to be 30 degrees, the same plane of the Ring intersected the plane of the Ecliptic or Orbit of the Earth, in the $16^{\circ} \frac{1}{4}$ of ♊ & ♋ , being inclined to it in an Angle of $31^{\circ} 20'$.

In order therefore, at any given time, to know exactly the position, species, and points of the Apogee and Perigee, both of the Ellipses of the Ring, and of those which the Satellites describe, we must resolve an oblique angled spherical Triangle, as was shewn before in the Precepts for calculating the Latitudes of *Jupiter's* Satellites.

Now as the Latitude of the Earth, in respect of the Orbit of *Saturn*, scarce ever exceeds the fourth part of a degree, it may, in this affair not yet sufficiently known, be safely neglected, as if both Planets moved in the same Orbit. Wherefore, from the geocentric place of *Saturn*, subtract 5 fig. $19^{\circ} 45'$, and there will remain the Argument of Latitude; with which, in *Tabulâ Latitudinariâ Satellitum* I. II. III. IV. (K k k k 2) take the Inclination, which is the Angle wherein a visual Ray drawn from the Earth to *Saturn* is inclined to the Orbits of these Satellites: And whose Sine is to Radius, as the lesser Diameters of these apparent Orbits are to the greater: And let the Ellipsis of the Ring be of the same species, the apogean Semicircle lying towards the North, if the Argument of Latitude be less than six Signs, but toward the South if greater. We have added also a *Table of Reductions*, necessarily requisite, in so great an inclination of the planes, for the knowledge of the true Apogee of the Satellites,

Moreover the most excellent *Cassini* has lately discovered, that the fifth and outward Satellite is carried round in an Orbit very different from the rest; its ascending Node being found to be in $5^{\circ} 00'$ of ♊ , with an Angle of Inclination of 15° only, or of half the former. Wherefore we have accommodated also to this a Table of Inclination and Reduction.

SYNOPSIS

OF THE

ASTRONOMY of COMETS.

THE antient *Egyptians* and *Chaldeans*, if we may credit *Diodorus Siculus*, by a long course of Observations, were said to be able to predict the Apparitions of Comets. But since they are also said, by the help of the same arts, to have prognosticated Earthquakes and Tempests, 'tis past all doubt, that their knowledge in these matters, was the result rather of meer astrological predictions, than of any astronomical Theories of the celestial motions. And the *Greeks*, who were the conquerors of both those people, scarce found any other sort of learning amongst them, than this. So that 'tis to the *Greeks* themselves as the inventors, and especially the great *Hipparchus*, that we owe the Astronomy we have, and which is now improved to such a height. But yet among the *Greeks*, the opinion of *Aristotle*, who would have Comets to be nothing else, but sublunary vapours, or airy meteors, prevailed so far, that this most difficult part of the Astronomical Science lay altogether neglected; for no body thought it worth while to take notice of, or write about, the wandering uncertain motions of what they esteemed vapours floating in the Ether; whence it came to pass, that nothing certain concerning the motions of Comets, can be found transmitted from them to us.

But *Seneca* the Philosopher, having considered the phenomena of two remarkable Comets of his time, made no scruple to place them amongst the celestial Bodies; believing them to be Stars of equal duration with the World, tho' he owns their motions to be governed by laws not then known or found out. And at last, which was no untrue or vain prediction, he foretells, that there should be ages some time hereafter, to whom *time and diligence should unfold all these mysteries*, and who should wonder how 'twas possible the *Antients* could be ignorant of them, after some lucky interpreter of nature had shewn, *in what parts of the Heavens the Comets wandered, what sort of Beings, and how great they were*. Yet almost all the Astronomers differed from this opinion of *Seneca*; neither did *Seneca* himself think fit to set down those phenomena of the motion, by which he was enabled to maintain his opinion; nor the times of those appearances, which might be of use to posterity, in order to determine these things. And indeed in turning over many histories of Comets, I find nothing at all that can be of service in this affair before A. D. 1337. At which time *Nicephorus Gregoras*, a *Constantinopolitan* Historian and Astronomer, did pretty accurately describe the paths of a Comet amongst the fixed Stars, but was too lax as to the account of the time; so that this most doubtful and uncertain Comet only deserves to be inserted in our Catalogue for the sake of its appearing near four hundred years ago.

The next of our Comets appeared in the year 1472, which is the swiftest of all, and nearest to the Earth; *Regiomontanus* observed it. This Comet, so fearful upon the account both of the magnitude of its body, and tail, moved forty degrees of a great Circle in the Heavens, in the space of one day; and was the first, of which any proper Observations are come down to us. But all those who considered Comets, until the time of *Tycho Brahe*, that great restorer of Astronomy, believed them to be below the Moon, and so took but little notice of them, reckoning them to be no other than vapours.

In the year 1577, *Tycho* seriously pursuing the study of the Stars, and having procured large instruments for the performing of celestial Mensurations, with far greater care and certainty than the Antients could ever hope for, there appeared a remarkable Comet; to the Observation of which *Tycho* vigorously applied himself; and found by many just and faithful trials, that it had no diurnal Parallax that was perceptible: And consequently was no aerial vapour, but also much higher than the Moon; nay, might be placed amongst the Orbs of the Planets, for any thing that appeared to the contrary; the cavilling opposition, made by some of the Schoolmen in the mean time, being to no purpose.

Tycho was succeeded by the most sagacious *Kepler*. He having the advantage of *Tycho's* Labours and Observations, found out the true Physical System of the World, and vastly improved the Science of Astronomy.

For he demonstrated that *all the Planets perform their Revolutions in Elliptic Orbits, whose planes pass thro' the Center of the Sun*; observing this law, that *the Areas of the elliptic Sectors, taken at the Center of the Sun, which he proved to be in the common focus of these Ellipses, are always proportional to the times in which the corresponding elliptical Arcs are described*. He discovered also, that *the distances of the Planets from the Sun are in the sesquialter Ratio of the periodical Times*; or, which is all one, that *the Cubes of the distances are as the Squares of the times*. This great Astronomer had the opportunity of observing two Comets, one of which was a very remarkable one. And from the Observations of these, which afforded sufficient indications of an annual Parallax, he concluded, that *the Comets moved freely thro' the Planetary Orbits, with a motion not much different from a rectilinear one; but of what kind he could not then determine*. Next, *Hévelius*, a noble emulator of *Tycho Brahe*, following *Kepler's* steps, embraced the same hypothesis of the rectilinear motion of the Comets, himself accurately observing many of them. Yet he complained that his Calculations did not perfectly agree to what he observed in the Heavens: And suspected, that *the path of a Comet was bent into a curve line concave towards the Sun*.

At length came that prodigious Comet of the year 1680, which descending, almost perpendicularly towards the Sun, arose from him again with as great a velocity. This Comet, which was seen for four months continually, by the very remarkable and peculiar curvature of its Orbit, above all others, gave the fittest occasion for investigating the Theory of its motion. And the Royal Observatories, at *Paris* and *Greenwich*, having been for some time founded, and committed

committed to the care of most excellent Astronomers, the apparent motion of this Comet was most accurately, perhaps as far as human skill could go, observed by Mr. *Cassini* and Mr. *Flamsteed*.

Not long after, that great Geometrician the illustrious *Newton*, writing his *Mathematical Principles of Natural Philosophy*, demonstrated not only what *Kepler* had found, did necessarily obtain in the planetary System; but also, that all the phenomena of the Comets would evidently follow from the same principles; which he abundantly illustrated by the example of the said Comet of the year 1680, shewing at the same time, a method of delineating the Orbits of Comets geometrically; therein solving, not without meriting the highest admiration of all men, a Problem whose intricacy rendered it scarce accessible to any but himself. This Comet he proved to move round the Sun in a parabolical Orb, and to describe Area's, taken at the Center of the Sun, proportional to the times.

Wherefore, following the steps of so great a man, I have attempted to bring the same method to an arithmetical Calculation; and that not without success. For, having collected all the Observations of Comets I could, I have framed the following Table, the result of a prodigious deal of calculation: Which, though but small in bulk, will be no unacceptable present to Astronomers. For these numbers are capable of representing all that has been yet observed about the motion of Comets, by the help only of the annexed general Table; in the making of which, I spared no labour, that it might come forth perfect, as a thing consecrated to posterity, and to last as long as the Science of Astronomy itself.

This Table of the Elements (M m m m 2) consists of ten Columns, whereof the *first* gives the years wherein the Comets were seen. The *second* and *third* exhibit the position of the planes of the Comets Orbits; that is, the points of the Ecliptic where their ascending Nodes were at the time they appeared, and the Angle of their Orbits Inclination to the Ecliptic. The *fourth* gives the places of their Perihelions, or the Vertices of their parabolic Orbits, reckoned in their own Orbits. The *fifth* gives the least distances of the Comets from the Sun in their Perihelions, in such parts as the mean distance of the Sun from the Earth contains 100000. In the *sixth* are the Logarithms of the Ratios of those distances to that mean distance from the Sun. The *seventh* contains the Logarithms of their mean diurnal motions, the time in which the Comet traverses ninety degrees of its Orbit from the Perihelion, being supposed to be divided into a hundred parts. The *eighth* exhibits the equated times of the Perihelions for the Meridian of *London* and *Julian* Stile. The *ninth* gives the Angles in the planes of their Orbits intercepted between their Perihelions and ascending Nodes, by means whereof the calculus becomes somewhat easier. Finally, the *tenth* shews which of their motions were according to the order of the Signs, and which on the other hand were retrograde.

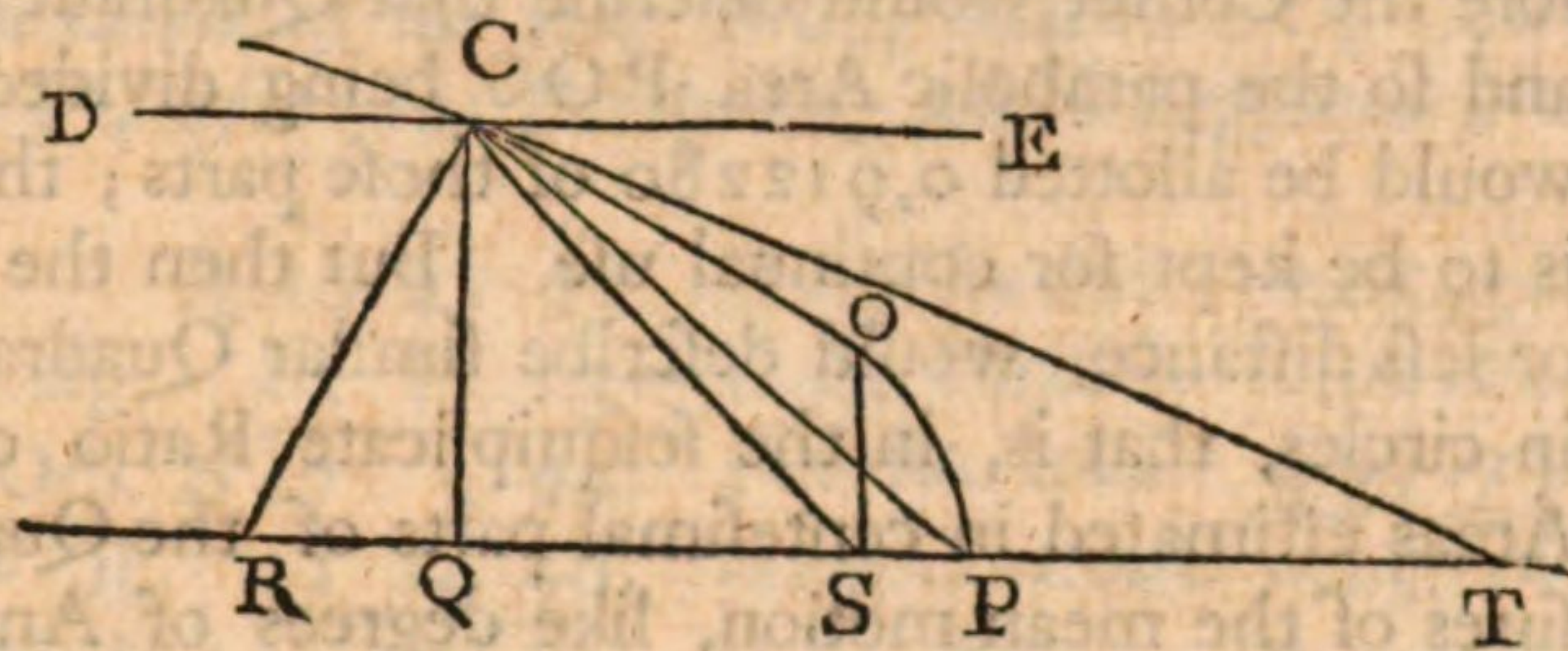
Then follow the Tables for the Motions of Comets.

The Construction and Use of the General Table.

AS the Planets move in elliptic Orbits, so do the Comets (as 'tis said) in parabolic ones, having the Sun in their common Focus, and describe equal Areas in equal times. Now since all Parabola's are similar Curves, therefore if any determinate part of the Area of a given Parabola be divided into any number of parts, by right lines drawn from the Focus; there will be a like division made in all Parabola's under the same Angles, and their respective distances from the Focus are proportional: Consequently this one Table of ours will serve for all Comets.

Now the manner of calculating this Table is thus derived.

In the Fig. let S be the Sun, P O C the Orbit of a Comet, P the Perihelion, O the place where the Comet is 90° distant from the Perihelion, C any other place. Draw the right lines CP, CS, and make ST, SR, equal to CS; and having drawn the right lines CT, CR, (whereof the one is a Tangent, and the other a perpendicular to the Curve) draw C



Now any Area being given, as $\text{COPS} = a$; 'tis required to find the Angle CSP, and the distance CS.

From the nature of the Parabola RQ is ever equal to half the Parameter to the Axis, and consequently if the Parameter be put $= 2$, then $RQ = 1$.

Let $CQ = z$; then $PQ = \frac{1}{2}z^2$; and the parabolic Segment $COP = \frac{1}{12}z^3$. But the Triangle CSP will be $= \frac{1}{4}z^2$; and so the mixtilineal Area $COPS$ will be $\frac{1}{12}z^3 + \frac{1}{4}z^2 = a$; whence $z^3 + 3z = 12a$: Wherefore resolving this cubic Equation, z or the ordinate CQ will be known. Now let the Area OPS be proposed to be divided into one hundred equal parts. This Area is $\frac{1}{12}$ of the Square of the Parameter; and consequently $12a$ is equal to that Square $= 4$. If therefore the Roots of these Equations $z^3 + 3z = 0,04$; $0,08$; $0,12$; $0,16$, &c. be successively extracted, there will be obtained so many Values of z , or Ordinates CQ respectively, and the Area SOP will be divided into one hundred equal parts. And in like manner is the Calculus to be continued beyond the place O . Now the Root of this Equation, since RQ is $= 1$, is the tabular Tangent of the Angle CRQ , or half the Angle CSP , wherefore the Angle CSP is given. And RC , the secant of the same Angle CRQ , is a mean proportional between $RQ = 2PS$, or unity, and RT , which is the double of SC , as is evident from Conics. Therefore SP is to SC in the duplicate Ratio of the Radius to the secant of half the Angle from the Perihelion of the Comet; or else in the Ratio of the versed Sine of the Angle CSR , or of the Angle from the Comet's Aphelion, to the Diameter of the Circle. After this manner therefore, I composed the foregoing Table, which serves to represent the motions of all our Comets, of which hitherto there has been none observed, but come within the laws of the Parabola. *

* Except that of 1680, which the Doctor calculates for an Elliptic Orbit.

It remains now to give the Rules for the Calculation, and to shew how the apparent place of a Comet may be determined by these numbers. Now the velocity of a Comet moving in a parabola, is every where to the velocity of a Planet describing a circle about the Sun, at the same distance from the Sun, as $\sqrt{2}$ to 1, as appears from Cor. 7. Prop. 16. Lib. I. of the Princip. Phil. Nat. Math. If therefore a Comet in its Perihelion was supposed to be as far distant from the Sun as the Earth is, then the diurnal Area, described by the Comet, would be to the diurnal Area described by the Earth, as $\sqrt{2}$ to 1. And consequently the time of the synodical Year, or $365^d. 6^h. 9^m$, is to the time in which such a Comet would describe the Quadrant of of its Orbit from the Perihelium, or the Area analogous to the space P O S, as the Area of a circle, or 3,14159 &c. to the parabolic Area $= \frac{4}{3} \times \sqrt{\frac{1}{2}} = \frac{2}{3} \sqrt{2}$. Therefore the Comet would describe that Quadrant in 109 days, 14 hours, 46 minutes; and so the parabolic Area P O S being divided into 100 parts, to each day there would be allotted 0,912280 of those parts; the Logarithm whereof, viz. 9,960128, is to be kept for continual use. But then the times in which Comets, at a greater or less distance, would describe similar Quadrants, are as the times of the revolutions in circles, that is, in the sesquiplicate Ratio of the distances: Whence the diurnal Areas estimated in centesimal parts of the Quadrant (which parts we put for measures of the mean motion, like degrees of Anomaly) are in each, in the sesquialter Ratio of the distance from the Sun in the Perihelion.

These things being necessarily premised, let it be proposed to compute the apparent place of any one of the forementioned Comets for any given time.

1st. Let the Sun's place be had, and the log. of its distance from the Earth.
 2^d. Take the difference between the given time and the time of the Perihelion, taken from the eighth column of the Elements, in days and decimal parts of a day: To the Logarithm of this number, let there be added the constant Logarithm 9,960128, and the complement arithmetical of once and a half the Logarithm of the distance of the Perihelion from the Sun: Their Sum will be the Logarithm of the Comet's mean Motion, to be sought in the first column of the general Table. But this may be obtained in a shorter way, viz. by only adding the Logarithm of the time to the Logarithm of the mean diurnal motion taken out of the seventh column.

3^d. With the mean Motion, let there be taken the correspondent Angle from the Perihelion in the Table, and the Log. for the distance from the Sun: Then if the time be after the Perihelion, in Comets that are direct, add, and in retrograde ones, subtract, the Angle thus found, to or from the Perihelion (in col. 4th). Or if the time be before the Perihelion, in direct Comets, subtract, and in retrograde ones add, the foresaid Angle to or from the place of the Perihelion; and so we shall have the place of the Comet in its Orbit. And to the Log. for the distance there found, let there be added the Log. of the distance in the Perihelion, (col. 6th) and the Sum will be the Log. of the true distance of the Comet from the Sun.

4th. The place of the Node, (col. 2) together with the place of the Comet in its Orbit being given, let the distance of the Comet from the Node be found; then the Inclination of the Plane being given, (col. 3) there will be given also, from the common rules of Trigonometry, the Comet's place reduced to the Ecliptic, the Inclination, or heliocentric Latitude, and the Log. of the curtate distance.

5th. From these things given, by the very same rules that we find the Planet's places, from the Sun's place and distance given, we may obtain the apparent or geocentric place of the Comet, together with the apparent Latitude. And this it may be proper to illustrate by an Example or two.

EXAMPLE I.

Let it be required to find the place of the Comet of the year 1664, March 1^d. 7^h. 00^m, P. M. London. That is 96^d. 19^h. 8^m, after the Perihelion, which happened November 24^d. 11^h. 52^m.

Log. dist. Perihel.	0,011044	Perihel.	♌ 10 41 25	Log. for dist.	0,255369
Log. Sesquial.	0,016566	Ang. corresp.	83 38 05—	Log. Perihel.	0,011044
Comp. Arith.	9,983434	Com. in Orb.	♋ 17 3 20	Co-fin. Incl.	9,990754
	9,960128	Afcen. ♌ II	21 14 00	Log. Curt. dist.	0,257167
Log. Time	1,985862	Com. à Node	34 10 40	Log. dist. ☉	9,997939
Log. Me. Mot.	1,929424	Red. to Eclip.	32 19 05	☉ × 21.44.33	
Mean Mot.	85,001	Com. Helio. ♋	18 54 55	Com. Ap. pl. ♋	29.18.20
		Inclin. North.	11 46 40	Ap. lat.	8.36.15 N.

EXAMPLE II.

Let it be required to find the place of the Comet of the year 1683, July 23, 33^h. 35^m, P. M. London. Or 13^h. 40^m, Equated Time. That is 21^d. 10^h. 50^m, after the Perihelion.

Log. dist. Perihel.	9,748343	Perihel.	♌ 25 29 30	Log. for dist.	0,111336
Log. Sesquial.	9,622514	Ang. corresp.	56 47 20	Log. Perihel.	9,748343
Comp. Arith.	0,377486	Com. in Orb.	♌ 28 42 10	Co-fine Incl.	9,913187
	9,960128	♌ ×	23 23 00	Log. Curt. dist.	9,772866
Log. Time	1,310723	Com. à ♌	35 19 10	Log. dist. ☉	0,006062
Log. Me. Mot.	1,648337	Red. to Eclip.	4 48 30	☉ Place ♌	10.39.14
Mean Mot.	44,498	Com. Helio. ♌	28 11 30	Com. Ap. pl. ♌	5.11.28
		Inclin. North.	35 2 00	Lat. North.	28.52.13

At the time specified in the first Example, 'twas observed * from the separate Observations of *Azoutio* and *P. Gottignio*, that the apparent place of this Comet, was so near the second Star of *Aries*, that it was not above nine or ten minutes more northerly, and as to the Longitude it nearly agreed †. But at the time of the second Example, I myself, near *London*, with the same Instruments whereby I formerly observed the southern Constellations, found the place of the Comet to be ☉. 5°. 11½', with 28°. 51' North Latitude, which agreed exactly with the Observation made at *Greenwich*, almost at the very same moment.

* At London.

† According to Dr. *Hook's* Observation it was 3' to the East.

As for the Comet of the year 1680, which came almost to the Sun itself, being in its Perihelion, not above one third of the Sun's Semidiameter distance from the surface of it, as the Parameter of its Orb is so very small, it could hardly be contained within the limits of the general Table, because of the excessive velocity of the mean Motion. Wherefore, in this Comet, the best way will be, after the mean Motion is found, to get from thence, by the help of the foregoing Equation $z^3 + 3z = \frac{4}{1.00}$ of the mean Motion, the Tangent of half the Angle from the Perihelion, together with the Log. for the distance from the Sun. Which being found, we are to proceed by the same Rules as in the preceding.

After this manner therefore, the Astronomical Reader may examine these Numbers, which I have calculated with all imaginable care, from the Observations I could collect. And I have not thought fit to make them public before they have been by myself duly examined, and made as accurate as 'twas possible, but at the expence of the labour of many years.

Now it may be proper to inform the Reader, that our five Comets, first mentioned in the Table, whereof the third and fourth was observed by *Peter Apian*, the fifth by *Paulus Fabricius*, as also the tenth seen by *Michael Mæstlin* in the year 1596, are not so certain as the rest; for the Observations were made neither with sufficient Instruments, nor due care, and on that account are disagreeing with themselves, and can by no means be reconciled with a regular computus. The Comet which appeared in the year 1684 was only taken notice of by *Blanchinus*, who observed it at *Rome*: And the last which appeared in the year 1698, was seen only by the *Parisian* Observers, who determined its course in a very uncommon manner. This Comet was a very obscure one, and altho' it moved swift, and came near enough to our Earth; yet we, who are not wont to be incurious in these matters, saw nothing of it. For want of Observations I have also left out of the foregoing Catalogue, those two remarkable Comets which have happened in this our age, one in *November* 1689, the other in *February* 1702. For they directing their courses towards the southern parts of the World, and being scarce conspicuous any where in *Europe*, met with no Observers proper for this purpose.

By comparing together the Elements of the motions of these Comets, 'tis apparent their Orbits are disposed in no manner of order; nor can they, as the Planets are, be comprehended within a Zodiac, moving indifferently every way, as well retrograde as direct; from whence it is clear, they are not carried about, or moved in a vortical system. Moreover the distances in their Perihelia are sometimes greater, sometimes less; which makes me suspect there may be a far greater number of them, which may move in Regions more remote from the Sun; and being therefore very obscure, and without tails, may pass by us unseen.

Hitherto I have considered the Orbits of Comets as exactly parabolical; upon which supposition it would follow, that Comets, being impelled towards the Sun by a centripetal force, would descend as from spaces infinitely distant; and by their falling acquire such a velocity, as that they may again fly off

into

into the remotest parts of the Universe, moving upwards with a perpetual tendency, so as never to return again to the Sun. But since Comets appear frequently enough, and as none of them are found to move with an Hyperbolic Motion, or a motion swifter than they might acquire by their gravity towards the Sun, it is highly probable they rather revolve about the Sun in very excentric elliptic Orbits, and make their returns after long periods of time: For so their numbers will be determinate, and, perhaps, not so very great. Besides, the space between the Sun and fixed Stars is so immense, that there is room enough for a Comet to revolve, tho' the period of its revolution be vastly long. Now the Parameter of an Ellipsis, is to the Parameter of a Parabola having the same Perihelion distance, as the Aphelion distance in the Ellipsis, is to the transverse Axis in the Ellipses: And the velocities are in the subduplicate Ratio of the Parameters: Which in very excentric Orbits, the Ratio comes very near to a Ratio of Equality: And the very small difference which happens, on account of the greater velocity in the Parabola, is easily compensated in determining the situation of the Orbit. The principal use therefore of this Table of the Elements of their motions, and that which indeed induced me to construct it, is, that whenever a new Comet shall appear, we may be able to know, by comparing together the Elements, whether it be any of those which has appeared before, or not; and consequently to determine the Axis of its Orbit, its Period, and to foretel its return.

Of the Motion of Comets in Elliptic Orbits.

SOON after I had compleated the foregoing Table of Elements (which was many years ago) I suspected, from the like situation of their Planes and Perihelions, that the Comets which appeared in the years 1531, 1607, and 1682, were one and the same Comet that had made three Revolutions in its Elliptic Orbit. But as the difference of their Periods and Inclinations, was somewhat too great, to be reconciled with what I had imagined, and as I judged the Observations made by *Apian* and *Kepler* upon the former ones, were not sufficiently accurate, not to say too rude, to determine an affair of such subtilty; I was content when I published at first this Synopsis in the year 1705, to hint at these my conjectures, as having some degree of probability; and to advise posterity carefully to watch for its return about the expected year 1758. But afterwards when I had carefully searched into the Catalogues of antient Comets, and discovered that three others had preceded the aforesaid three, manifestly in the same order, and at like intervals of time (*viz.* in the year 1305 about *Easter*, in the year 1380 the month unknown, and lastly in the month of *June* 1456), I began to be much more confirmed in my former opinion: And having obtained a method by which the calculation may be accurately and easily managed for any elliptic Orbit however excentric, instead of the parabolic trajectory of the Comet of the year 1682, described in the Elements, I attempted to reduce its position in respect to the Plane of the Ecliptic and of the Earth moving in it, unto an Ellipsis of a given magnitude and kind, in whose Focus the Sun is placed; so that all Mr. *Flamsteed's* Observations on this Comet, taken with a very large and very accurate Sextant, and due corrections being made for the Refractions, might abundantly confirm my Theory subjected to the examination of so rigid a computation.

Now it is manifest that two Periods of this Comet are finished in 151 years nearly, and that each alternately, the greater and the less, are compleated in about 76 and 75 years; wherefore taking the mean Period to be 75 years and a half, then (by Prop. 15. Book I. of the Principia) the semitransverse Axe of the Comet's Orbit is

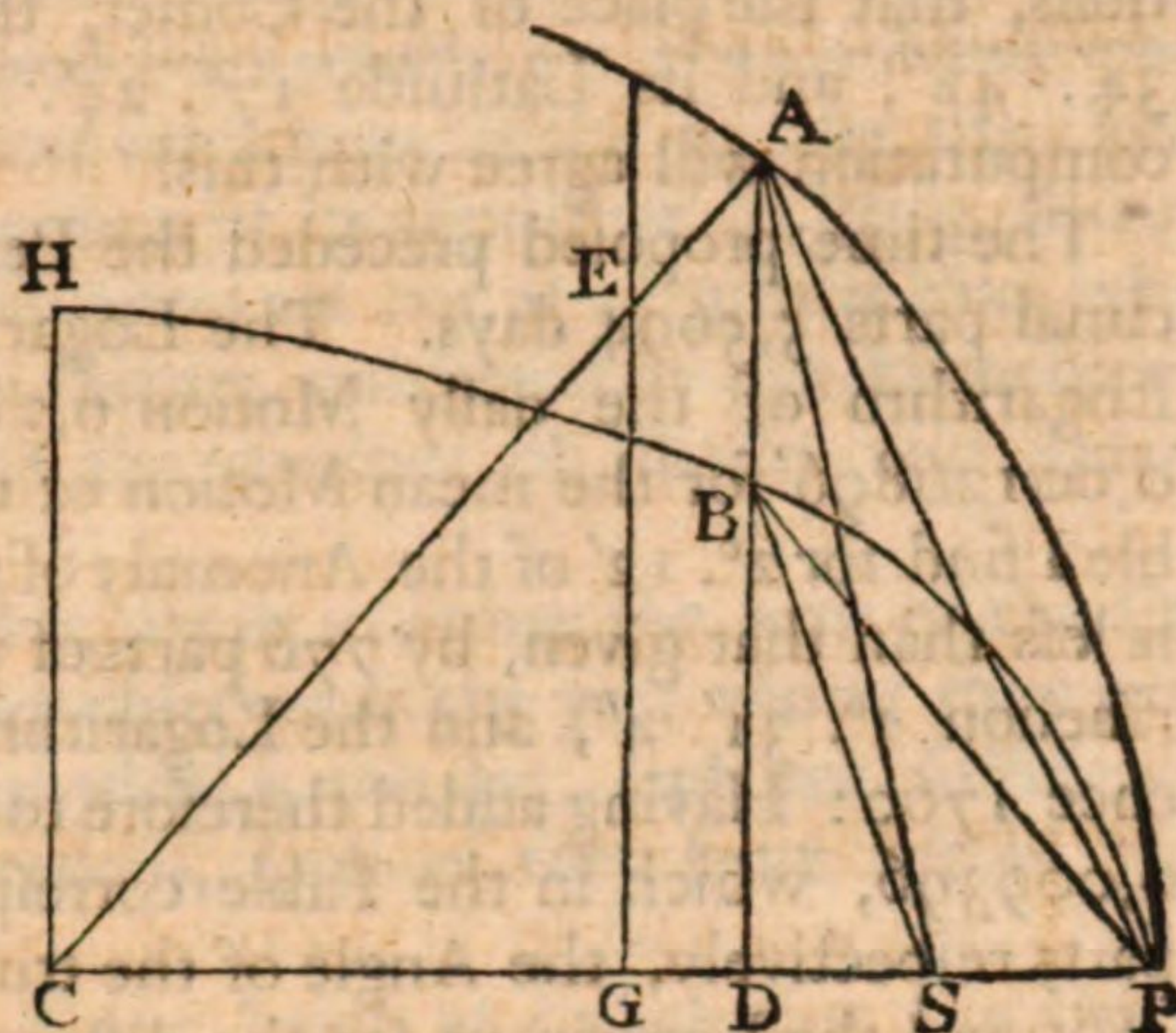
to the mean distance of the Earth from the Sun, as $\sqrt{75\frac{1}{2}}$, that is as 17,8635 to 1. But having found the perihelion distance most agreeable to Observations to be 0,5825 of those parts, the Excentricity of the Orbit becomes 17,2810, whence half the lesser Axis is 4,5246. I found the Plane of this Ellipsis to be inclined to the Plane of the Ecliptic in an Angle of $17^{\circ}. 42'$, and to have its ascending Node in $\gamma 20^{\circ}. 48'$; but that the Perihelion of the Comet, which was retrograde in this Plane, was in $\omega 1^{\circ}. 36'$, or $109^{\circ}. 12'$ after the ascending Node. And that the equated time of the Perihelion was *September* 4^d. 21^h. 22^m. Also that its mean diurnal motion was $\frac{1}{75\frac{1}{2}}$ part of the mean diurnal motion of the Sun, or $0^{\circ}. 0'. 47''$

as near as can be. And the Radius being 1, the length of the Arc $0'. 47''$ that is 0,000227843, is as the diurnal motion of the Comet at the extremity of the lesser Axis, and has the same Ratio to the circumference of a Circle, as one day has to the periodic time, and which the elliptic Area daily intercepted between Rays drawn to the Sun, has to the Area of the whole Ellipsis; which may therefore be very conveniently taken for the measure of the Comet's mean Motion. Therefore its Logarithm 6,357636 added to the Logarithm of the time from the Perihelion, gives the Logarithm of the mean Motion for the given time, or of the Ratio of the Area cut off by Rays drawn from the Sun to the Comet's place in its Orbit and to the Perihelion, to the whole Area of the Ellipsis.

But this Area is compounded of two, namely of the Area of a Triangle, whose Base is the perihelion distance of the Comet, the altitude being the corresponding ordinate; and of the Area of a Segment cut off by a chord drawn from the vertex of the Ellipsis to the Comet. Which perhaps to some it will be convenient to explain fully by a scheme.

Let CP be the greater Semiaxis of the Comet's elliptic Orbit PBH, CH the lesser Semiaxis, PA a Circle circumscribing the Ellipsis, and S the Focus; whence PS is the perihelion distance, and CS the Excentricity of the Orbit. Let the place of the Comet be in B, from whence draw BD an Ordinate to the Axis, which produced may meet the Circle in A, draw the right Lines AP, AS; BP, BS; and in the right Line CA take CE equal to CS, and draw EG perpendicular to the Axis. Now it is evident, from the approved Discoveries of *Kepler*, that the Area

Area P S A P is to the Area of the whole Circle, and likewise P S B P to the Area of the whole Ellipsis, as the time in which the Comet describes the Arc B P to the periodic Time of its making an intire revolution in the Ellipsis. But the Area P S A P is composed of the circular Segment A P A and of the Triangle P S A, of which Triangle, $PS \times AD$, the Sine of the Angle A C P, is double; but twice the Segment is the excess of the Arc A P above the Sine A D multiplied by the Radius C P. Make the Radius $CP = 1$, and $PS = b$, and any given Area $PASP = a$; and let it be required to find $AD = z$ the Sine of the Anomaly of the Excentric A C P. Now zb is double the Triangle P S A; and according to the known Theorem, the circular Arc $AP = z$



$+ \frac{1}{6} z^3 + \frac{1}{40} z^5 + \frac{1}{112} z^7 \&c.$ whence double the Area of the Segment P A P, becomes $\frac{1}{6} z^3 + \frac{1}{40} z^5 + \frac{1}{112} z^7 \&c.$ And therefore $2a = bz + \frac{1}{6} z^3 + \frac{1}{40} z^5 + \frac{1}{112} z^7 + \&c.$ Now the Root z of this Equation being extracted, gives the Anomaly of the Excentric A C P, and its versed Sine P D: And if it be made as C P to C S so P D to S G, $PG = SG + PS$ will be equal to B S the distance of the Comet from the Sun. Finally say as C P is to C H so is A D to B D, which will be the Sine of the true Anomaly, or of the Angle P S B to the Radius B S.

But as the method of extracting the Root of this Equation is by no means obvious, and not generally to be done in every case but by trials; wherefore to lessen the trouble of the calculation, I have, according to the principles now laid down, drawn up the following Table, of the same form almost with the general Table for the parabolic Motion; by means of which, all the Observations made at *Greenwich* of the Comet of the year 1682 are fitly enough represented.

In composing this Table I made use of the artifice which *Kepler* did in making his *Rudolphine Tables*. For by making the Angle of the Anomaly of the Excentric A C P to be equally increased; in the second column under the title of the mean Motion you have the double of the Area of the mixtilinear space P A S P, compounded of the difference of the Arc A P and Sine A D into the Radius $CP = 1$, and of the Rectangle $PS \times AD$ taken together; that is, by taking P S to 1 in the Ratio which half the greater Axis 17,8635 has to 0,5825 the perihelion distance; whence P S is 0,0326085, and its Logarithm 8,513331. The fourth column exhibits the Angle P S B of the true Anomaly from the Perihelion; and the sixth the Logarithm of the Ratio which P S has to the distance S B respectively. The other columns give the differences of the former, from whence the proportional parts are more readily obtained. But this Table will not hold good in Ellipses that are not similar to this of ours.

Then follow the Tables.

Here follows an example of this calculation. In the year 1682, *August* 30^d. 7^h. 42^m equated time at *Greenwich*, it was found, by repeated and accurate Observations, that the place of the Comet, the Refraction being subducted, was in $\cap$ 15°. 34'. 42", and its Latitude 17°. 24'. 56". Now let us see with what success our computation will agree with this.

The time proposed preceded the Perihelion of the Comet 5^d. 13^h. 40^m, or in decimal parts 5,5694 days. The Logarithm of this number 0,745811 added to the Logarithm of the daily Motion 6,357636 gives the Logarithm of the number 0,00126896 for the mean Motion of the Comet before the Perihelion. In the Table I find for 2°. 12' of the Anomaly of the Excentric, the mean Motion 0,00126120, is less than that given, by 776 parts of which 11655 increase the Angle from the Perihelion 1°. 31'. 4", and the Logarithm for the distance from the Sun, by the difference 1760: Having added therefore to the Angle 16°. 57'. 55", and to the Logarithm 0,009396, which in the Table correspond to that mean Motion, the proportional parts respectively, the Angle of the true motion from the Perihelion becomes 17°. 3'. 58", and the Logarithm for the distance from the Sun 0,009513, the Logarithm of that distance becomes 9,774809. To the place of the Perihelion which is in $\cap$ 1°. 36', add 17°. 3'. 58", and it will give the place of the Comet in its Orbit in $\cap$ 18°. 39'. 58", but reduced to the Ecliptic $\cap$ 18°. 33'. 36", with the heliocentric Latitude 17°. 41'. 14" North; whence the Logarithm of the curtate distance is 9,753779. At the same time the Sun was in M 17°. 20'. 54", and the Log. of his distance from the Earth 0,002395. From these things given it follows that the geocentric place of the Comet was in *Libra* 15°. 35'. 58", and its Latitude 17°. 24'. 11", erring in the Longitude 1'. 16", but in the Latitude only 0'. 45".

By comparing in this manner the Theory now explained with all the Observations of Mr. *Flamsteed*, I have found that the Heavens agreed with this elliptic Motion, the differences not deserving notice, as appears from the Table annexed.

1682 App. Time.	Comet's Long. by Observ.	Lat. N. Observat.	Comet's Long. by Comput.	Lat. N. Comput.	Differ. Longit.	Differ. Latit.
d h m	° ' "	° ' "	° ' "	° ' "	' "	' "
Aug. 19 16 38	$\cap$ 18 15 5	25 49 19	$\cap$ 18 14 19	25 48 33	— 0 46	— 0 46
20 15 38	24 47 55	26 11 50	24 48 5	26 11 40	+ 0 10	— 0 10
21 8 21	29 37 51	26 15 15	29 39 3	26 18 3	+ 1 12	+ 2 48
21 16 19	m 1 58 0		m 1 58 23		+ 0 23	
22 8 8	6 30 8	26 4 35	6 32 10	26 6 37	+ 2 2	+ 2 2
29 8 20	$\cap$ 12 35 55	18 37 27	$\cap$ 12 38 19	18 35 3	+ 2 24	— 2 24
30 7 45	15 34 42	17 24 56	15 35 58	17 24 11	+ 1 16	— 0 45
Aug. 31 8 21	18 16 20		18 17 30		+ 1 10	
Sept. 1 7 33	20 28 12	15 11 37	20 29 31	15 11 23	+ 1 19	— 0 14
4 7 22	25 39 36	12 22 29	25 39 34	12 22 42	— 0 2	+ 0 13
5 7 32	26 58 20	11 31 26	26 57 45	11 33 34	— 0 35	+ 2 8
8 7 16	$\cap$ 29 56 0	9 25 31	$\cap$ 29 54 40	9 26 26	— 1 20	+ 0 55
9 7 26	m 0 41 36	8 49 2	m 0 39 39	8 49 0	— 1 57	— 0 2

Neither did I think it at all necessary to bestow any more trouble on the consideration of the Orbit of this Comet, since the differences we find are not wholly to be attributed to the errors of our numbers, but partly to the Observations themselves, partly to the supposed places of the fixed Stars which are not absolutely perfect, more especially on account of the different refractions of the air near the Horizon, by which the Comet was affected all the time of its appearing, it being seldom seen above 12 degrees high. Besides these differences are not at all greater than what we usually find in the Theory of the primary Planets, cultivated by the Astronomers for so many ages. I wish we could reduce the motions of *Jupiter* and *Saturn* within as narrow limits.

Now having established therefore this Orbit, let us examine the path of the Comet which *Kepler* and *Longomontanus* say they observed in the year 1607; they were certainly great Astronomers, but their description is too lax, and not sufficiently adapted to our examination. Their Observations, such as they have left us, you have as follows.

In the year 1607, Sept. 16, Old Stile, *Kepler* being at *Prague* saw this Comet the first time about nine o'clock, or eight at *London*, under the great Bear, and as well as he could judge by its situation in respect to some remote fixed Stars, its place was in *Leo* $18^{\circ}. 30'$, with $35^{\circ}\frac{1}{2}$ North Latitude. At three the next morning, its distance from the hinder knee of the Bear (ψ by *Bayer*) was a little less than the distance of the two in the nearer foot (λ & μ of the Bear), and by the eye in a track nearly parallel, as it were to a line drawn from the Bear's knee to the single Star in the neck (ν of *Bayer*). Then correcting the places of the Stars (which, I know not by what chance, are very erroneously described in *Tycho's* Table), the place of the Comet was in *Leo* $21^{\circ}. 49'$. Lat. $36^{\circ}. 12'$ N. when the equated time at *London* was $13^h. 51^m$.

September 18^d. 8^h. 30^m at *Prague*, and 7^h. 20^m equated time at *London*. The Comet was seen to be below the little unformed Star near the great unformed Star between the tails of the Bear and the Lion, which then was in $12^{\circ}. 18'$ of *Virgo* with $40^{\circ}. 33\frac{1}{4}'$ Lat. from whence it was distant by a Diameter of the Moon, in a right line running thro' the last in the Bear's tail, and thro' the hand of *Bootes*. These Observations place the Comet in $\mathbb{M}$ $12^{\circ}. 2'$, with a Latitude of 40° ; since a distance as estimated by the eye equal to the Moon's Diameter, must be at least 40 minutes.

At *Copenhagen*, Sept. 21^d. 7^h. 30^m, that is at 6^h. 30^m equated time at *London*, *Longomontanus*, by a Sextant of five Cubits Radius, as he says, found the Comet to be $30^{\circ}. 59'$ distant from the middle of the great Bear's tail, and about the same time $16^{\circ}. 45'$ from the bright Star in the Crown, by repeated Observations. Hence, the places of the fixed Star being adjusted by the *British Catalogue*, the Longitude of the Comet comes to be $\mathbb{M}$ $16^{\circ}. 48'$, and its Latitude $37^{\circ}. 12'$ North. About the same time *Kepler*, in company with a young Pupil, observed the Comet to be $6^{\circ}. 5'$ distance from *Arcturus*, in a right line running from *Arcturus* to the preceding shoulder of *Bootes* (γ by *Bayer*). Whence the place of the Comet was at least in $17^{\circ}. 0'$ of *Libra*.

September 25. An hour after Sun set, that is, at *Prague* 6^h. 48^m at *London* 5^h. 36^m equated time. The Comet was seen a little higher in a right line drawn from *Arcturus* to the bright Star in the *Serpent's* neck (α) distant from it 4°. 30'. But two hours after Sun set, or 7^h. 37^m at *Prague*, it plainly appeared to be above a line drawn from the bottom of the *Serpent's* neck (δ) to that in the stretching out of its neck (β). The first Observation places the Comet $\mathbb{M}$ 12°. 0'; but the other at the second hour, about 12°. 30' in *Scorpio*.

September 27. The Comet came into a right line drawn from the second Star in the neck of the *Serpent* (δ) to the bright Star in the neck, standing under that Star (ϵ) which follows the bright one, at the distance of the Moon's Diameter or a little more; and a right line drawn from the Comet thro' that Star in its neighbourhood, fell in the middle between the bright Star in the *Crown* and the shoulder of *Hercules* (β). Which denotes that the Comet was in $\mathbb{M}$ 18°. 50' with 23°. 20' North Lat. *Kepler* mentions not the hour, but it seems that the Observation was not made soon in the night, because he saw the lesser Stars. Suppose it to be at 6^h. 30^m at *London* equated time.

October 1^d. 6^h $\frac{1}{2}$. At *Malmoge*, in *Scania*, *Longomontanus* saw the Comet at a little less than half a degree distant from the northern hand of *Serpentarius*; and it was then in a right line with *Arcturus* and the southerly Star in the same hand: About the same time, *Kepler* says, it was a little lower than the right line joining the two Stars of the hand, and distant from the nearest of them about a third part of their distance. Both these Observers, I know not how it happened, are wrong in their deducing the place of the Comet from their own Observations; one of them makes it to be in $\mathbb{M}$ 25°. 51', with 17°. 35' Latitude; the other in $\mathbb{M}$ 26°. 30' with 17°. 40' Latitude; a great difference, tho' they both nearly agree in the estimate they give us of the distance and situation of the Comet. If, instead of the Diameter of the Moon, we put 40' (as it commonly seems to be by a naked eye), and suppose the Comet in a right line with the Stars of the hand, it would be 23' more northerly than the nearest, and 34 min. more westerly; that is in $\mathbb{M}$ 26°. 16' with 17°. 40' North Latitude. But by the consent of both of them it was sensibly before this right line, and therefore nearly in $\mathbb{M}$ 26°. 0'; which accurately enough brings the Comet into a right line joining *Arcturus* and the Star in the *Southern hand*, as it was observed by *Longomontanus*.

October 2. Both these Observers in the foregoing places denoted the Comet's place in respect to the aforesaid Stars in the hand. *Longomontanus* at a quarter past six saw it in the Vertex of an obtuse Isosceles Triangle with the said Stars, yet it rather inclined to the North of them. But it was in a right line, as it appeared by a stretched thread, with the last but one on the side of the *Crown* (ϵ) and the northern one in the hand; also in another right line with the southern one in the hand, and the lowest one in the head of *Scorpio* (I suspect *Capricorn*). *Kepler* about the same time (for he mentions not the hour) saw the Comet in the middle between the two Stars of the hand, but below a right line joining them, and a little higher than a right line drawn from the lowest of them to the next bend

bend of the *Serpent* (μ of the *Serpent* by *Bayer*). All things considered, the place of the Comet was in $\mathbb{M}$ $27^{\circ}. 5'$, with $16^{\circ}. 40'$ North Latitude, and $5^h. 12^m$ equated time at *London*.

October $5^d. 8^h. 30^m$. At *Prague*, *Kepler* with a small instrument formerly *Tycho's*, observed the distance of the Comet from the knee of *Ophiucus* (η) to be $14^{\circ}. 14'$, and from the preceding shoulder of *Hercules* (β) $28^{\circ}. 56'$. Hence the Comet was in $\mathbb{M}$ $29^{\circ}. 47'$, with $14^{\circ}. 2\frac{1}{3}'$ North Latitude.

October 6^d . At the same hour it was distant from the knee of *Ophiucus* $13^{\circ}. 22'$ and from the shoulder of *Hercules* $29^{\circ}. 27'$. Whence its Longitude was $\mathbb{I}$ $0^{\circ}. 33\frac{1}{2}'$, and its Latitude $13^{\circ}. 36\frac{1}{2}'$.

October $9^d. 8^h$. These distances were $11^{\circ}. 22'$; and $31^{\circ}. 19'$; and therefore the place of the Comet was in $\mathbb{I}$ $2^{\circ}. 1'$ with $11^{\circ}. 56'$ North Latitude.

October $12^d. 6^h. 31^m$. At *Copenhagen*, by the agreement of both Observers, the place of the Comet was in $\mathbb{I}$ $1^{\circ}. 50'$, and $9^{\circ}. 45'$ North Lat. But as this was concluded by the extension of threads over remote Stars only, which method of Observation is hardly to be depended on in small distances, I would not from hence determine that the apparent motion of the Comet was already become retrograde.

October $16^d. 6^h. 15^m$. At *Prague*, *Kepler* saw this Comet for the last time, and that only now and then between the Clouds: It was, says he, very low in a vertical Circle which was about the Semidiameter of the Moon more westerly than the same knee (ζ) of *Ophiucus*, and nearly four times as much below the knee, but certainly more than three times, as the distance of the two Stars in the hand seem to be asunder. Concerning this Observation see *Longomontanus*, where he blames *Kepler* for want of due care, in depressing the Comet to $6\frac{1}{2}^{\circ}$ of Latitude, whereas from the said situation of it he computes that it could have no less Longitude than $\mathbb{I}$ $2^{\circ}. 10'$, nor less Latitude than 8° .

These Observations I have taken from a little book of *Kepler's* on Comets, published in the year 1619 at *Augsburg*; and from an Appendix of *Danish Astronomy* by *Longomontanus*; and (tho' I wish these Observations had been made with more accuracy, especially towards the end of its appearance) they indeed do indifferently point out the path of this Comet; however they sufficiently prove that it was one and the same Comet with that of the year 1682, by the very same argument that we are assured that *Mars*, after he has been for some time hid under the rays of the Sun, is the same Planet as before.

For both Comets were retrograde, and the same kind of Orbit is common to both, and the motion of their Nodes and Perihelions is found scarcely to differ more than the Orbits of the superior Planets are found to do after the like number of years. But as between the years 1531 and 1607 there are 76 years, I have made the Semiaxis a little greater, viz. so that it is to the mean distance of the Sun as $\sqrt[2]{76\frac{2}{3}}$, or as 17,9422 to 1; and I have increased its perihelion distance proportionally, Observations requiring the same, so that it may be 0,58507, the Logarithm of which is 9,767270. Now it had its ascending Node

Node in δ $17.48'.40''$, with the inclination of its Plane to the Ecliptic $17^\circ.20'$; but its Perihelion in ω $1^\circ.3'.40''$; and the equated time of its Perihelion *October* $16^d.21^h.44^m$ at *London*. Also its mean diurnal motion is made the seventy sixth part of the Sun's diurnal motion, or $0,000226344$, the Logarithm whereof is $6,354769$.

These Elements laid down, I have, by the very same method of calculation as in the former, compared the Observations made on this Comet, such as they are, with the numbers of my Table; and tho' too great a diversity may be found in some of the latter, yet the candid Reader will readily perceive that it is chiefly owing to the disagreement of the Observations among themselves.

MDCVII. Equat. Time.			Com. Long. Observ.			Lat. North Observat.			Com. Long. Comput.			Lat. North Comput.			Differ. Long.			Differ. Latit.				
d	h	m	°	'	"	°	'	"	°	'	"	°	'	"	'	"	'	"				
Sept. 16	13	51	♊	21	49	0	36	12	0	♊	21	55	56	36	20	4	+	6	56	+	8	4
18	7	20	♊	12	2	0	40	0	0	♊	12	3	15	39	50	0	+	1	15	—	10	0
21	6	30	♈	16	48	0	37	12	0	♈	16	45	13	37	11	2	—	2	47	—	0	58
25	5	36	♍	12	12	0				♍	12	8	47				—	3	13			
27	6	30		18	50	0	23	20	0		18	44	40	23	16	0	—	5	20	—	4	0
Oct. 1	5	25		26	0	0	17	40	0		25	58	40	17	45	46	—	1	20	+	5	46
2	5	12		27	5	0	16	40	0		27	7	12	6	44	0	+	2	12	+	4	0
5	7	15	♍	29	47	0	14	2	20	♍	29	39	25	14	5	35	—	7	35	+	3	15
6	7	15	♋	0	33	30	13	36	20	♋	0	14	0	13	22	55	—	19	30	—	13	35
9	6	45		2	0	50	11	56	0		1	25	7	11	33	48	—	34	43	—	22	12
12	5	25		1	50	0	9	45	0		2	1	17	10	4	36	+	11	17	+	19	36
16	5	0	♋	2	10	0	8	0	0	♋	2	14	32	8	24	10	+	4	32	+	24	10

Here it falls in our way to observe by the bye, that the Nodes of this Comet preceded the Nodes of the Comet of 1682 three degrees, their motion being progressive according to the order of the Signs; whilst its Perihelion advanced only $32'.20''$. But in this space of years the præcession of the Æquinoxes is $1^\circ.2'.30''$; therefore in respect of the fixed Stars, the Aphelion went backward half a degree, the Nodes in the mean time going forward $1^\circ.57'$. Whereas in the Planets the Aphelia go forward and the Nodes go backward, because of the centripetal forces of the heavenly bodies, manifestly mixing themselves with the forces of the Sun, and disturbing them, which otherwise would be found to be most accurately as the square Root of their distances from his Centre; from whence all bodies revolving round that Centre, in quiescent and immoveable Planes, would describe elliptic Orbits always returning into themselves. By Prop. 14. Book III. of the Principia. But this Comet is retrograde, whence by the same causes its Aphelion must go backwards and its Node forwards in an immoveable Heaven, by the same causes I say, which make the Nodes of the Planets go backward and their Aphelia forward.

Perhaps some may object the diversity of their inclinations and periods, which is greater than what is observed in the revolutions of the same Planet; seeing one period exceeded the other by more than the space of one year, and the inclination of the Comet of the year 1682 exceeded that of the year 1607 by twenty two intire minutes. But let it be considered what I mentioned at the end of the Tables of *Saturn*, where it was proved that one period of that Planet is sometimes longer than another by thirteen days; and that is evidently occasioned by the force of gravity tending towards the Center of *Jupiter*, which force indeed in equal distances is only the thousandth part of that force tending to the Sun itself, by which the Planets are retained in their Orbits. But by a more accurate computation, the force of *Jupiter* towards *Saturn*, for example, in the great conjunction as they call it, *January* 26 in the year 1683, was found to be to the force of the Sun upon the same *Saturn*, as 1 to 186; the sum of the forces therefore is to the force of the Sun, as 187 to 186. But at the same distance from the Center, the periodic Times of Bodies revolving in a Circle are in the subduplicate Ratio of the forces with which they are urged: Wherefore the gravity being increased by the 186th part of itself, the periodic Time will be shortened by about the 374th part, that is by a whole month in *Saturn*. How much more is a Comet liable to these errors, which makes its excursion near four times higher than *Saturn*; and whose velocity being increased by less than the 120th part of itself, would change its elliptic Orbit into a parabolic Trajectory.

But it happened in the summer of the year 1681, that the Comet seen in the following year, in its descent towards the Sun, was in conjunction with *Jupiter* in such a manner, and for several months so near him, that during all that time it must have been urged likewise towards the Center of *Jupiter* with near the 50th part of that force by which it tended towards the Sun: Whence, according to the theory of gravity, the Arc of the elliptic Orbit, which it would have described had *Jupiter* been absent, must be bent inwards towards *Jupiter* in an hyperboliform winding, and have assumed a kind of Curve very compounded and as hitherto not to be managed by the Geometers; in which the velocity and direction of the moving Body, in proportion to the cause, would be very different from what it otherwise had in the Ellipsis.

Hence a reason may be assigned for the change of its inclination: For as the Comet in this part of its path had *Jupiter* on the North almost in a perpendicular direction to its path, that portion of its Orbit must be bent towards that quarter; and therefore its Tangent being inclined in a greater Angle towards the Plane of the Ecliptic, the Angle of the inclination of the Plane itself must be necessarily increased. Besides the Comet continuing long in the neighbourhood of *Jupiter*, after it had come towards him from parts much more remote from the Sun with a slower motion, and now being urged with the joint central forces of both, must have acquired more accelerated velocity, than it could lose in its recess from *Jupiter*, by forces acting a contrary way, its motion being more swift, and the time being less: Whence the proper velocity of the Comet
being

being increased by this excess, it is probable that its return will not be until after the period of 76 years or more, about the end of the year 1758, or the beginning of the next. But having touched upon these things, I shall leave them to be discussed by the care of posterity, after the truth is found out by the event.

That the Comet of the year 1531, observed by *Apian*, was the same with this now described, appears from its period, its retrograde motion between the Sun and the Earth, the situation of the Perihelion and Nodes, and its inclination, none whereof differ much from the former: Notwithstanding if any one would undertake accurately to define all of these, he would labour in vain, because the Observations are so very imperfect, being taken with a small instrument for Azimuths in a gross manner, and were only designed to shew the ascent of the Comet's tail towards the parts opposite to the Sun.

Yet lest any one should complain that any thing relating to this affair is omitted by us, I have consulted *Apian's* book called *Astronomicon Cæsareum*, dedicated to the Emperor *Charles V.* after with difficulty I had found it; and I have made the following extract from it, no where else published.

In the year 1531, at *Ingolstadt* on the *Danube* (in the Latitude $48^{\circ}.40'$. and Longitude $11^{\circ}\frac{1}{2}$, or 46 min. of time to the East of *London*), *Aug.* 13 in the evening *Apian* first saw the Comet to the North West: And the bright Star *Arcturus* being full West, or in the prime Vertical, as they say, the Comet was $7^{\circ}.56'$ high, and $49^{\circ}.26'$ from the West northerly. On the next night, *Aug.* 14, after one revolution of the Heavens, the Comet was $8^{\circ}.29'$ high, being now $45^{\circ}.22'$ northwards. *Aug.* 15, in the same situation of the Heavens, the Comet was 9° high, and $41^{\circ}.22'$ northerly. *Aug.* 16, it was $9^{\circ}.43'$ high, and only $35^{\circ}.13'$ northerly. *Aug.* 17, it was in the Azimuth of $30^{\circ}.46'$ from the West and $10^{\circ}.14'$ high. *Aug.* 18, it was $10^{\circ}.39'$ high, and $24^{\circ}.42'$ from the West. Afterwards it was for three nights under clouds; and *Aug.* 22, in the same situation of the starry sphere, the Comet was $11^{\circ}.25'$ high, and $7^{\circ}.34'$ from the West northerly. Lastly, *Aug.* 23, *Arcturus* being West, the Comet was more northerly only $3^{\circ}.50'$, and $11^{\circ}.25'$ high.

But the Observer supposes, according to the Astronomy of his own age, that *Arcturus* was then in $\square 16^{\circ}.59'$, with $31^{\circ}.30'$ North Latitude erroneously, instead of $\square 17^{\circ}.41'$, and Latitude $30^{\circ}.57'$, as is evident from more certain Observations. This being substituted for the other, the right ascension of the Mid-heaven when *Arcturus* was in the West at *Ingolstadt* will be $278^{\circ}.10'$. Hence the Altitudes, due allowances being made for the Refractions, by a calculation more accurate than needs, the places of the Comet will come out as follows.

MDXXXI.			Comet's			Comet's			Comet's Long.			Lat. North			Longit.			Lat. N.		
Igoldsf. App. time			Rt. Ascen.			Decl. Nor.			by Observat.			Observat.			Apian.			by Apian		
d	h	m	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"	°	'	"
Aug. 13	8	26	151	45	45	36	49	25	20	16	0	23	30	10	19	15	23	15		
14	8	22	156	17	20	35	3	50	24	41	30	23	18	45	23	39	23	2		
15	8	19	160	32	50	33	11	50	29	1	0	23	1	30	24	29	22	0		
16	8	15	166	43	20	30	4	30	5	36	15	22	21	40	4	32	22	1		
17	8	11	170	58	40	27	42	25	10	19	40	21	47	0	9	14	21	25		
18	8	7	176	19	30	24	8	50	16	37	0	20	36	15	15	30	20	12		
22	7	54	190	6	30	13	27	10	3	49	0	16	20	40	1	23	16	32		
23	7	50	192	53	30	11	1	20	7	25	30	15	13	40	2	51	14	31		

If we compare these places one with another, we shall soon see that the disagreement is very great, without doubt owing to the badness of the instrument with which they were taken. But in deducing the places from the third and two last Observations, a very grievous error is committed by *Apian* himself. However altho' nothing of certainty or accuracy can be drawn from such uncertain data, yet they are very sufficient to shew that this Comet had its path extremely like that of 1682, and if we add three degrees to its Latitude, almost the same.

It would be to no purpose to compare our numbers with these; since it is utterly impossible that by any regular computation things should be reconciled that are so irregular and repugnant among themselves. But if the periodic Time be made to consist of 75 years, and so the greater Semiaxis of the Ellipsis be 17,7845; the perihelion distance will be 0,57993; the ascending Node in δ $15^{\circ} 30'$; the inclination $17^{\circ} 00'$, and the Perihelion in ω $1^{\circ} 12'$. But the time of the Perihelion, in the year 1531, was *August* 25^d. 19^h. 00^m; and the mean diurnal motion the seventy fifth part of the Sun's diurnal motion, or 0,000229362 whose Log. is 6,360522; we may, by means of the said Table, compute the motion of this Comet, and we shall for the most part find them more agreeable to the Observations, than the Observations are among themselves.

You see therefore an agreement of all the Elements in these three, which would be next to a miracle if they were three different Comets; or if it was not the approach of the same Comet towards the Sun and Earth, in three different revolutions in an Ellipsis around them. Wherefore if according to what we have already said it should return again about the year 1758, candid posterity will not refuse to acknowledge that this was first discovered by an *Englishman*.

And this Comet is as it were the *Mercury* of the Comets, surrounding the Sun with a lesser Orbit, and shorter periodic Time, while all the rest expatiate more widely, and after very long and more than secular revolutions, nay of many ages duration, offer themselves to the sight of Men for but a little space of time, to wit, only while being in the neighbourhood of the Sun, they shine
with

with a stronger light, and exhibit sensible tails, which is nothing but very rarified vapours raised from the matter of the Comet agitated by the force of heat, and thrown upwards with great velocity into the Æther which is almost a vacuum. But concerning this physical affair, hear what the most celebrated *NEWTON* says, in his demonstrative manner, towards the end of the third book of the *Principia*.

Hence it comes to pass, that we have not the same evidence that any other Comets have returned, as we have in this of ours of the year 1682. But if any argument may be drawn from the equality of periods, and from similar phenomena, that wonderful Comet which appeared in the year 1680, was one and the same with that of 1106, when *Henry I.* was King of *England*, it first emerged out of the Sun's rays "on *Friday, February 16*, in the evening, and was seen for a long "time afterwards every evening. The Star, which seemed little and obscure, appeared in the South-east. But the Ray which proceeded from it was very clear "and large, shining towards the North-east," as we have it recorded in the *Saxon Chronicle* by one who seems to have been an eye-witness. Now this description agrees very well with that of the Comet of the year 1680, both in respect to the length of its tail, and also its situation in regard to the Sun.

Also in the consulate of *Lampadius* and *Orestes* in the year of *Christ* 531, when *Justinian* was Emperor, another Comet, like this, appeared in the evening, of which *Malela*, the Author of the *Antiochian Chronicle*, perhaps an eye-witness also, writes thus, "A great and fearful Star appeared in the West, emitting a white beam "upwards, which as it appeared like the flashes of lightning, some called it *Lampadian*:" "It was seen for twenty days." I could have wished indeed the Historian had told us the time of the year this happened. However it is manifest that the interval of years between this and that seen in the year 1106, is nearly equal to that between the years 1106 and 1681, that is to say about 575 years.

And if we reckon backward such another period, we shall come to the forty fourth year before *Christ*, when, soon after the death of *Julius Cæsar*, a very remarkable Comet appeared, mentioned by almost all the Historians of those times, and by *Pliny* in his *Natural History*, *Lib. II. c. 24*, where we have the words of *Augustus Cæsar* himself concerning it: By means whereof we are led to the very time and situation of this phenomenon in the Heavens; wherefore it will not be amiss to recite them. "In the very days of my games, a hairy Star " (*Sydus crinitum*) was seen for seven days, in that part of the Heavens which "is under the Septentriones, it arose about the eleventh hour of the day, and "was clearly to be seen all over the World." Now *Augustus* dedicated these his games to *Venus genitrix* (for the *Cæsars* boasted that they descended from the Goddess *Venus*), and they began on his birth-day, that is on the 23d of *September*, and continued for seven days, as we may learn from a fragment of an old *Roman Calendar* in p. 135, of *Gruter*, the new edition. Now *Cæsar* says

says the Comet was seen all these seven days, but that does not imply that it was not seen before and after those days. And when he says the Comet was seen under the *Septentriones*, he is not to be understood that it was seen in the North under the Pole, but under the *septem Triones*, that is below the bright Stars of the *Great Bear*. And that it could be risen at the eleventh hour of the day can by no means be conceived; wherefore instead of the word day it should be read night, or that word should be omitted as it is in *Suetonius*: For the Sun being then near the autumnal Equinox, the eleventh hour at *Rome*, at which the Comet is said to rise, begun at four in the morning according to our reckoning; so that it was judged to rise between four and five o'clock, or about an hour and half before Sun rise: So that it preceded the Sun about twenty degrees, which must be understood about the first beginning of its appearance, or at least of the seven days mentioned. But at the time it shone under *Charles's Wain*, it rose much sooner, and had a considerable northern Latitude, by its retrograde motion from the Sign *Virgo* to the side of *Cancer*; that is, having travelled thro' the intermediate space between *Leo* and the *Bear*.

Now if we resume the situation of the Comet's Orbit of the year 1680, in respect of the fixed Stars, and suppose its Perihelion for the forty fourth year before *Christ*, to be about the 18th day of *September*; a computation being any how made, it will presently appear, that the course of the Comet in its ascent from the Sun, where it projected its tail, and *was a bright Star and conspicuous all over the World*, sufficiently agrees with the course of this described by *Augustus Cæsar*. It is not therefore unwarrantable to believe that this Comet seen by *Cæsar*, having finished three revolutions, again appeared in the year 1680; especially when the like Comets have appeared at equal intervals, *viz.* in the year of *Christ* 531 and 1106.

Let us suppose then that its period is about 575 years. Therefore half the greater Axis of the Ellipsis will be $\sqrt[2]{575^2}$, or 69,14785 of such parts as the mean distance of the Earth from the Sun is unity. But the perihelion distance in such parts will be 0,006175, very agreeable to what we find it to be by Observations, and therefore the conjugate Semiaxis of the Orbit will be 0,92410; or supposing the greater Semiaxis = 1, the perihelion distance will be 0,000089301 whose Logarithm is 5,950858, and its lesser Semiaxis 0,0133641 whose Logarithm is 8,125939: These foundations being laid, I have made the following Table, of the same form almost with the preceding: But as this Comet, on account of its vicinity to the Sun, could not be seen until the fourth day after the Perihelion, the Table begins at the fifth degree of the excentric Anomaly: Also the Angles are reckoned from the Aphelion, and the Logarithms are those of the Ratio's of the true distances of the Comet from the Sun, to the mean distance of the Sun from the Earth. Moreover I have computed in Decimals of a degree in the former part, that there might not be occasion for second differences in the interpolation.

Then follows the Table.

As to the position of the far extended Plane of this elliptic Orbit, I retain the same Nodes as in the parabolic Trajectory above described, namely $2^{\circ}. 2'$ of *Capricorn* and *Cancer*, with the inclination of $61^{\circ}. 6'. 48''$ to the Plane of the Ecliptic. But the Perihelion of the Comet, which moves in this Plane according to the order of the Signs, falls in $\text{I } 22^{\circ}. 44'. 25''$, and therefore the Aphelion is in $\text{II } 22^{\circ}. 44'. 25''$, or $9^{\circ}. 17'. 35''$ before the descending Node: I make the equated time of the Perihelion to be *December 7^d. 23^h. 9^m* at *London*; viz. in the year 1680. As to its mean diurnal motion it becomes $\frac{1}{575}$ of the Sun's diurnal motion, that is 0,0000299167 whose Logarithm is 5,475914, to which if there be added the Logarithm of the time before or after the Perihelion, we shall soon have the mean motion for any given moment.

Perhaps it may not be amiss to annex an example of this calculation. In the year 1680, *November 3*, 16^h. 47^m equated time reduced to the Meridian of *London*, *Gottfried Kirch*, at *Coburg* in *Saxony*, observed the Comet in its descent towards the Sun, when it was as yet destitute of any tail, and as a little white cloud without a Nucleus, scarce to be discerned by the naked eye, namely when as fortune would have it, he was viewing thro' a Telescope the Moon and Stars which were near it. He described accurately enough the situation of this phenomenon among the neighbouring small fixed Stars: Whence, the curious industry of the Reverend Mr. *Pound* also helping me, I obtained its place in respect to the Ecliptic sufficiently accurate, which was in $\text{Q } 29^{\circ}. 51'$, with $1^{\circ}. 18'$ North Latitude. But concerning this Observation see the *Philosoph. Transact.* N^o 342.

Now this Observation preceded the time of the Perihelion $34^{\text{d}}. 6^{\text{h}}. 22'$, or in decimals of a day 34,2653. Let the Logarithm of this 1,534854 be added to the Logarithm of the mean diurnal motion for the given time 7,010768, and we have 0,001025105. I find in the Table this mean motion between $10^{\circ}. 24'$ and $10^{\circ}. 36'$ of the excentric Anomaly, and by due interpolation the Angle after the Perihelion comes to be $8^{\circ}. 21'. 37''$, and the Logarithm of the Comet's true distance from the Sun is 0,061658. To the place of the Aphelion $\text{II } 22^{\circ}. 44'. 25''$, add $8^{\circ}. 21'. 37''$, and we shall have the place of the Comet in its own Orbit in $\text{Q } 1^{\circ}. 6'. 2''$, that is, $0^{\circ}. 55'. 58''$ before the descending Node: Hence its heliocentric place reduced to the Ecliptic will be in $\text{Q } 1^{\circ}. 34'. 58''$. with $0^{\circ}. 49'. 0''$ North Latitude: And the Logarithm of the curtate distance 0,061614. Now the Sun was at that time in $\text{III } 22^{\circ}. 44'. 50''$, and the Logarithm of his distance from the Earth 9,994672. From which data, if a trigonometrical computation be made in the manner as usual in the Planets, the geocentric place of the Comet will be in $\text{Q } 29^{\circ}. 51'. 22''$, with $1^{\circ}. 17'. 32''$ of North Latitude, just as it was observed.

Indeed this Observation of *Kerch* is a very noble one, not only that it is prior by 13 days to the Observations of all others, but as it is the sole and only one of many, published by foreigners on the Comet as seen in the morning, to which we may give full belief. How much the sagacity of
Newton

Newton was exercised in polishing them and comparing them one to another, may be seen in the third book of his *Principia*. Which nevertheless every where are commonly so inconsistent one with another, as not taken with due care or proper instruments, that we judge them unworthy of further notice here; as those Observations, in our opinion, should be tried by the calculation, and not the calculation by them.

But the following Table exhibits a most exact series of the motions of the Comet as seen in the evenings, in a great measure deduced from the Observations made with the aforesaid Sextant at *Greenwich*, and verified as far as could be by it, according to the reformed places of the fixed Stars in the *British Catalogue*. The last two only are *Newton's*, who very artfully estimated the motion of the vanishing Comet by the Stars in the *foot of Perseus*. And a calculation being accurately made according to the premised Elements, produced a congruity abundantly sufficient to satisfy the most scrupulous Calculator.

MDCLXXX. Equat. Time.			Com. Long. Observ.			Lat. North Observat.			Com. Long. Comput.			Lat. North Comput.			Differ. Long.		Differ. Latit.	
d	h	m	°	'	"	°	'	"	°	'	"	°	'	"	'	"	'	"
Nov.	3	16 47	♏	29	51	0	1	18	0	♏	29	51	22	1	17	32	+	0 28
Dec.	12	4 46	♏	6	32	30	8	28	0	♏	6	31	20	8	29	6	—	1 10
	21	6 37	♏	5	8	12	21	42	13	♏	5	6	14	21	44	42	—	1 58
	24	6 18		18	49	23	25	23	5		18	47	30	25	23	35	—	1 53
	26	5 21	♏	28	24	13	27	0	52	♏	28	21	42	27	2	1	—	2 31
	29	8 3	♏	13	10	41	28	9	58	♏	13	11	14	28	10	38	+	0 33
	30	8 10 ¹	♏	17	38	20	28	11	53	♏	17	38	27	28	11	37	+	0 7
Jan.	3	7 50	♏	2	53	0	27	7	48	♏	2	52	42	27	7	48	—	0 18
1681.	5	6 1 ¹		8	48	53	26	15	7		8	48	51	26	14	57	—	0 2
	9	7 1		18	44	4	24	11	56		18	43	51	24	12	17	—	0 13
	10	6 6		20	40	50	23	43	32		20	40	23	23	43	25	—	0 27
	13	7 9	♏	25	59	48	22	17	28	♏	26	0	8	22	16	32	+	0 20
	25	7 59	♏	9	35	0	17	56	30	♏	9	34	11	17	56	6	—	0 49
	26	6 50		10	19	0	17	40	30		10	20	14	17	40	29	+	1 14
Jan.	30	8 22		13	19	51	16	42	18		13	18	28	16	40	5	—	1 23
Feb.	2	6 35		15	13	53	16	4	1		15	11	59	16	2	7	—	1 54
	5	7 4 ¹		16	59	6	15	27	3		16	59	17	15	27	0	+	0 11
Mar.	1	11 10	♏	27	52	40	12	23	40	♏	27	51	47	12	22	38	—	0 53
	9	8 38	♏	0	43	4	11	45	52	♏	0	42	43	11	45	35	—	0 21

Let now the Patrons of Vortices and an absolute Plenum, try whether according to their Hypotheses, they can delineate the path of this Comet, thro' nine whole Signs and for the space of above four months; and whether any other Curve, or any other law of motion sensibly different from ours, can exhibit with the like certainty the peculiar curvature of its path, and its velocities so very differently increased and diminished. If they cannot do this, let

let them at last leave off trifling, give themselves up to the study of truth, and swear according to the Motto of our *Royal Society*, *Nullius in verba*.

Now this Comet, in that part of its Orbit in which it descended towards the Sun, came so near the paths of all the Planets, that if by chance it had happened to meet any one of the Planets passing by, it must have produced very sensible effects, and the motion of the Comet would have suffered the greatest disturbance. In such case the plane and species of its Ellipsis and its periodic Time would have been very much changed, especially from meeting with *Jupiter*. In the late descent, the true path of this Comet left the Orbits of *Saturn* and *Jupiter* below itself a little towards the South: It approached much nearer to the paths of *Venus* and *Mercury*, and much nearer still to that of *Mars*. But as it was passing thro' the plane of the Ecliptic, viz. to the southern Node, it came so near the path of the *Earth*, that had it come towards the Sun thirty one days later than it did, it had scarce left our Globe one Semidiameter of the *Sun* towards the North: And without doubt by its centripetal force (which with the great *Newton* I suppose proportional to the bulk or quantity of matter in the Comet), it would have produced some change in the situation and species of the *Earth's* Orbit, and in the length of the year. But may the great good GOD avert a shock or contact of such great Bodies moving with such forces (which however is manifestly by no means impossible), lest this most beautiful order of things be intirely destroyed and reduced into its antient chaos. But of this by the bye.

Now as it is more than probable that the rest of the Comets described in our Catalogue, will return again after having finished their periods, whence their periodic times being given, the Axes, and from thence the species of their elliptic Orbits will be also given; wherefore that I might render the tediousness of the operose calculation as easy as I could to future Astronomers, I have added the following Table, wherein are contained the double Areas of the Segments, the Logarithms of the right and versed Sines, with their differences, and the versed Sines themselves to every fifth part of the degrees of the excentric Anomaly. Now if we make the greater Semiaxis of the Ellipsis to the perihelion distance, as unity to a fourth proportional number, and if to the Logarithm of this fourth proportional we add the Logarithms of the right Signs in the Table one by one, or their differences by a continual addition, we shall have the double Areas of the Triangles to be added to the double Segments found in the second column, for the mean motions to the excentric Anomalies respectively. Afterwards in like manner add the Logarithms of the versed sines to the Logarithm of the given Excentricity, and thro' the whole series of numbers answering to these sums, let there be added every where the perihelion distance, and the result will be a Table of the true distances of the Comet from the Sun. Finally it will be in every case, as the distance of the Comet from the Sun, is to the lesser Axis of the Orbit, so is the Sine of the excentric Anomaly, to the Sine of the Angle at the Focus of the Ellipsis.

F I N I S.

I N D E X.

PAGINÆ hujus Libri numeris non distinguuntur, ideoque literis quibus chartæ signatæ sunt eorum loco utimur. e. g. B b, paginam primam chartæ B b indicat, B b 2 secundam.

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<i>Tabula Declinationum punctorum Eclipticæ</i>	B b
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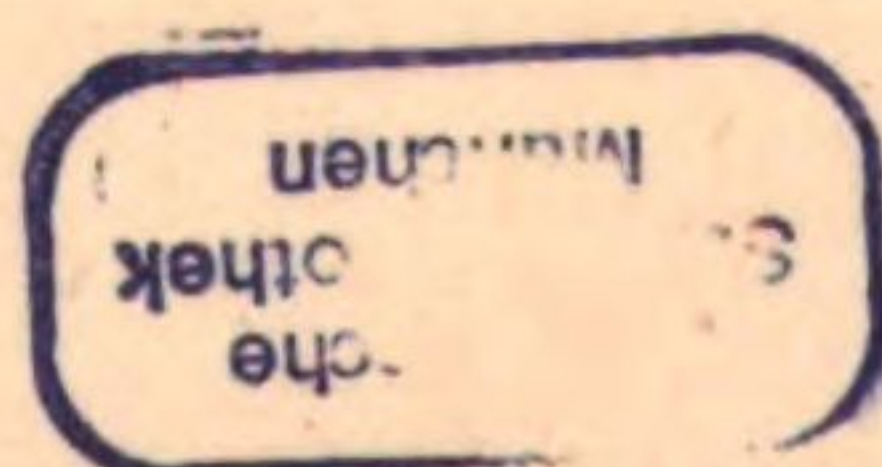
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R E G I S T R U M.

*. (a) (b) (c) (d) (e) (f) Aa. Bb. Cc. Dd.
 Ee. * Ee. ** Ee. Ff. Gg. Hh. Ii. Kk. Ll. Mm.
 Nn. Oo. Qq. Rr. Ss. Tt. Uu. Xx. Yy. Zz. Aaa.
 Bbb. Ccc. Ddd. Eee. Fff. Charta fine litera. Bbbb. Cccc.
 Dddd. Eeee. Ffff. Gggg. Hhhh. Hhhh3. Iiii.
 Kkkk. Llll. Mmmm. Nnnn. Oooo. Pppp. Qqqq.
 Rrrr. Ssss. Tttt. Uuuu. Xxxx. A***. B***. C***.
 α b. α c. α d. α e. α f. α g. α h. α i. α k. α l. α m.
 α n. α o. α p. α q. α r. Charta fine litera.

Charta O o sex paginas continet, cæteræ omnes quatuor.

Halley, Edmond,

Astronomical Tables

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